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Wireless Technology, Inc.

**C-MAX
VSMJP24E
VIDEO SERVER/ENCODER**

*Installation and
Operation Manual*

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INFORMATION

FCC NOTICE

This device complies with Part 15 of the FCC Rules.

Operation is subject to the following two conditions:

- 1.) This device may not cause harmful interference, and
- 2.) This device must accept any interference that may be received, including interference that may cause undesired operation.

IC NOTICE

This device complies with the RSS-210 Industry Canada.

Operation is subject to the following two conditions:

- 1.) This device may not cause interference, and
- 2.) This device must accept any interference, including interference that may cause undesired operation.

READ THIS MANUAL

Every effort has been made to insure that this WTI system is of the highest quality. This product has been carefully inspected to comply with rigid quality standards before shipment to you. In consideration of your investment and the desire to obtain full performance capability engineered into your new WTI product, we recommend that you read this manual before attempting to operate your system.

FOR MORE ASSISTANCE OR MORE INFORMATION:

Wireless Technology, Inc. (WTI)
2064 Eastman Avenue, Suite 113
Ventura, CA 93003-7787

TEL 805/339-9696
FAX 805/339-0932

EMAIL: sales@wirelesstech.com

INTERNET: <http://www.gotowti.com> or
www.wirelesstech.com

The software/firmware furnished with the equipment is confidential to and is copyrighted by *Wireless Technology, Inc.* (WTI). It is not to be copied or disclosed in any manner without the consent of *Wireless Technology, Inc.* (WTI) The software/firmware is furnished to the purchaser under a license for use on a single system.

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PRODUCT WARRANTY AND REPAIR

PRODUCT WARRANTY

We appreciate your purchase of *Wireless Technology, Inc.* (WTI) security products. We take pride in the quality of our products and have manufactured each new WTI product to exacting quality standards. In normal use, it will provide you with years of satisfactory performance. However, should you experience difficulty, you are protected under the provisions of this warranty.

WTI warrants to the original user a product that is free of defects in materials and workmanship in normal use. WTI warrants to the original user that WTI's products will be free of defects in materials and workmanship in normal use for a period of 12 months from the date of sale. WTI's obligation under this warranty shall be limited to the repair, including all necessary parts and the cost of labor connected therewith, or at our option, the replacement of any product that shows evidence of a manufacturing defect within the warranty period.

This warranty is extended to all WTI products purchased and used within the United States of America and is valid only when service is rendered by the authorized WTI (*Wireless Technology, Inc.*) Warranty Station.

This warranty shall not apply to appearance or accessory items including, but not limited to, knobs, connectors, cabinets and connecting cables. This warranty shall not, in addition, apply to repairs or replacements necessitated by any cause beyond the control of WTI including, but not limited to, acts of nature, improper installation, misuse, lack of proper maintenance, accident, voltage fluctuations, unauthorized repairs or modifications.

This warranty becomes void in the event serial numbers are altered, defaced or removed, or an attempt is made to field service or alter performance of any WTI products.

WTI reserves the right to make changes in design, or to make additions to, or improvements upon, products without incurring any obligation to install the same on products previously manufactured.

The foregoing is in lieu of all other warranties expressed or implied and WTI neither assumes nor authorizes any person to assume for it any other obligation or liability in connection with the sale of our products. In no event shall WTI or its Authorized Dealers be liable for special or consequential damage arising from the use of this product, or any delay in the performance of this warranty due to causes beyond its control.

PRODUCT WARRANTY AND REPAIR

REPAIR AUTHORIZATION

Please contact Wireless Technology, Inc. (WTI), to obtain a repair authorization number (RA) and provide the following information:

1.) Product Model & Serial Numbers

2.) Date of shipment, purchase order number, sales order number or WTI invoice number.

3.) Details of the defect or malfunction. If there is a dispute regarding the warranty or product, which does not fall under the warranty conditions stated within the description of the written warranty, please include a written explanation with the product when returned.

SHIP FREIGHT PRE-PAID TO:

Wireless Technology, Inc. (WTI)
2064 Eastman Avenue, Suite 113
Ventura, CA 93003-7787
TEL 805/339-9696
FAX 805/339-0932

RETURNS

No unauthorized returns will be accepted. All returns must have an authorized (RA) number issued by the factory (CA number if returned for credit and RA number if returned for repair). Products returned for repair or credit will be rejected if no authorization number has been issued or freight has not been pre-paid. All merchandise returned for credit will be subject to a 20% restocking and refurbishing charge.

SAFEGUARDS AND TOOLS

IMPORTANT SAFEGUARDS

- 1.) Read Instructions. It is important to read all safety and operating instructions before installing or using this equipment.
- 2.) Retain Instructions. Retain this manual and any supplements for future reference.
- 3.) Follow Instructions. Follow all instructions herein for use of this equipment.

Do not attempt to open the sealed Transmitter and Receiver Assembly. There are no user-serviceable parts inside. Refer servicing to the Wireless Technology, Inc. (WTI) factory service center only.

- 4.) Heed warnings. Adhere to all warnings on the equipment, and in this manual.
- 5.) To reduce the risk of electric shock or equipment damage, work on the unit only when the power is shut off and is unplugged from its power source to prevent accidental activation. Also take precautions to avoid contact between the equipment and other electrical wires or power sources that may be present at the installation site.

RECOMMENDED TOOLS AND ACCESSORIES FOR PROPER INSTALLATION:

- 1.) Tie-wraps to secure cable runs
- 2.) #1 and #2 Phillips screwdriver
- 3.) #3 Slot screwdriver
- 4.) Cordless power drill
- 5.) Set of open end or SAE wrenches
- 6.) Silicone caulking compound for antenna connector
- 7.) Self-sealing connector tape - Used to weatherproof all outdoor cable connections
- 8.) Appropriate conduit if boxes are mounted outdoors.
- 9.) Hand held radios

Wireless Technology, Inc. (WTI) recommends the use of RG59/U such as Belden 8241 or equivalent 75Ω coaxial cable with 22-gauge solid copper center conductor and foam polyethylene dielectric. Either RG6/U or RG11/U would make an excellent substitute.

Long coaxial cable runs cause signal degradation and/ or "SYNC" discrepancies. Limit RG59/U cable lengths to 800 feet. For coaxial runs from 800 feet to 1000 feet, use RG6/U or RG11/U.

Do not use screw on type BNC connectors. They are not suited for reliable installations.

CAUTION

NON COMPLIANCE MAY RESULT IN DEATH OR NON-SERIOUS INJURY; INCLUDING DAMAGE TO THE UNIT AND OTHER PROPERTY.

- This equipment is for indoor use and all communication wiring is limited to the interior of a building.
- Please connect the power cord only to the correct type of outlet indicated in the manual or product specification. If connected to other types, fire and/or electric shock may result.
- Please use only the power cord provided with the product. Use of other types may result in fire and/or electric shock.
- Do not expose the product to moisture and humidity. Doing so may result in fire and/or electric shock.
- Install the product at least 8 inches (20 cm) distance from other machines or electronic products.
- Do not place containers with liquid on top of the product or close to the product. It may lead to fire and/or electric shock as a result.
- Do not remove the case of the product or modify the product in any way. Doing so may result in electric shock. If internal examination and maintenance are deemed necessary, contact WTI (Wireless Technology, Inc.).
- In case of smoke, smell or noise, promptly turn off the power switch and remove the power cord from the product. Continued operation of the product may lead to malfunction or damage of the product that cannot be repaired. Please request a customer service contact from the authorized system vendors or technicians.
- Do not touch the product with wet hands; doing so may result in electric shock.
- If the product is dropped or damaged, turn off the power and remove the power cord from the product. Continued operation of the product may result in malfunction or damage of the product cannot be repaired.
- Do not score, bend, twist, pull or heat the power cord. Damage to the power cord may result in fire and/or electric shock.
- Do not operate or store the product in areas of extreme heat or cold, high humidity, in front of an air conditioner, or where there is excessive dust; these may result in malfunction of or damage to the product.

INTRODUCTION

WTI's VSMJP24E video server and encoder is an IP based video relay server that converts an analog signal to digital. The benefit of video and audio being transformed into a digital signal is that it can be carried over long distances without signal loss or distortion. Two-way voice communications between a remote site and the main center is also supported with this unit.

The VSMJP24E includes IP Remote software that is very easy to use and provides powerful functionality. With this software, not only can users monitor live and recorded video, but users can also establish recording schedules, create motion detection areas, configure alarm inputs and outputs, and control numerous PTZ cameras. When a project requires that users manage multiple security sites from one location, the VSMJP24E is the intelligent solution!

FEATURES INCLUDE:

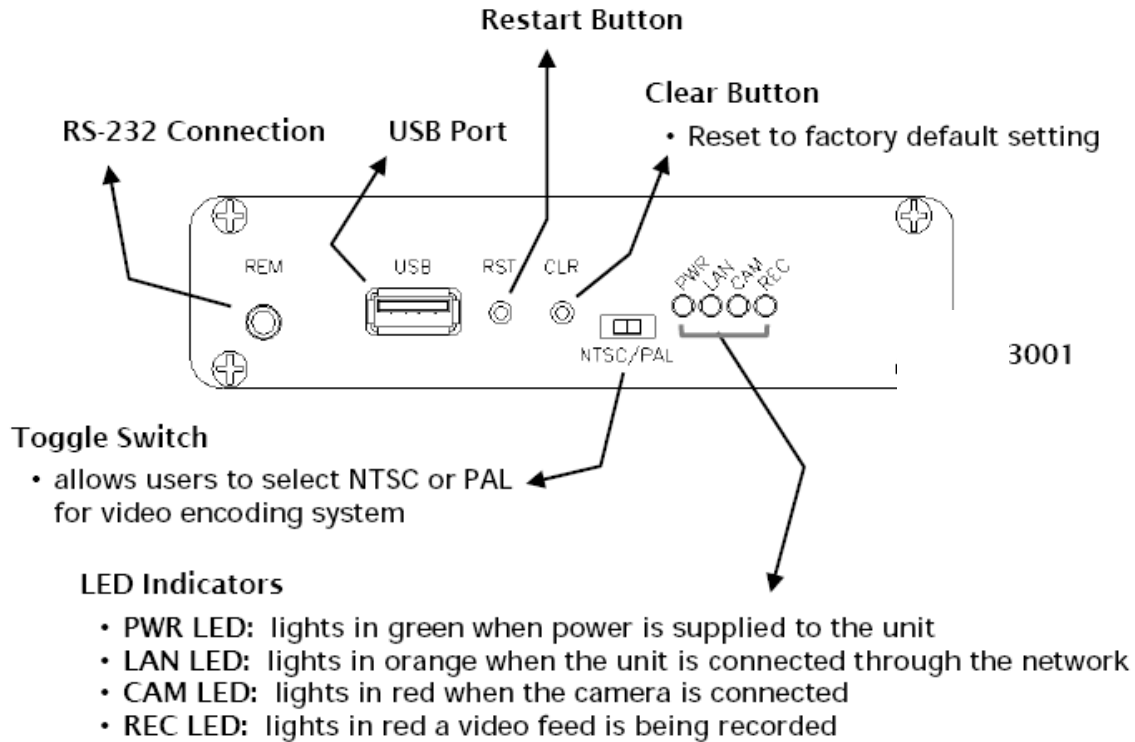
The C-MAX VSMJP24E Video Server and Encoder include the following features:

- 1-4 channel remote view.
- Maximum transmit speed of 30FPS @ 704x480 (MPEG-4 base).
- Supports multiple codec formats (MPEG-4, MPEG-2, MJPEG).
- Embedded Linux based operation.
- Video loop-back output.
- Supports 2-way audio.
- Supports USB 2.0 host.
- Supports DHCP/PPPoE/DDNS network protocols.
- E-mail notice on event.
- Intelligent record when hardware detects motion.
- Pre/post alarm.
- Digital signature function.
- Watchdog function.
- Remote S/W upgrade.
- Remote monitoring without S/W (using Internet Explorer).
- Total management with NDMS system.

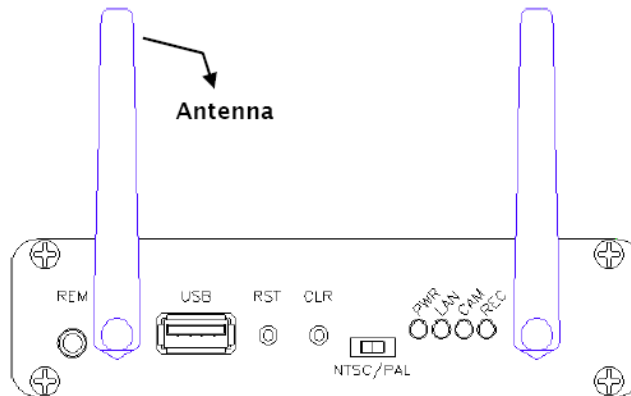
CONTROLS AND CONNECTORS

FRONT PANEL

The front panel of the VSMJP24E unit contains the status LED indicators, USB port for media backup, toggle switch for changing the video encoding system, and the restart and reset button for factory default settings, as shown below.



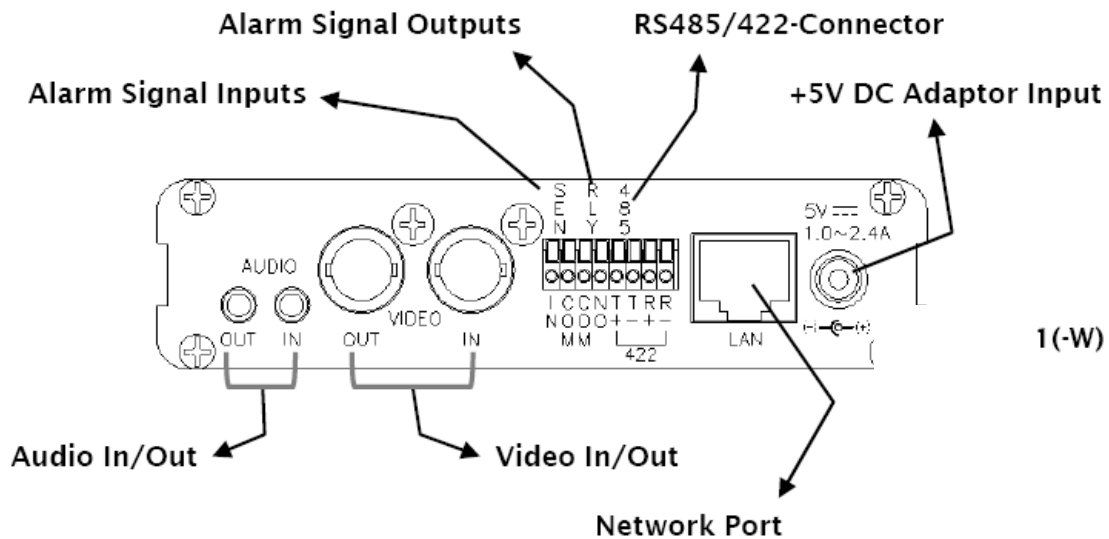
The VSMJP24E also includes optional wireless antenna connection.



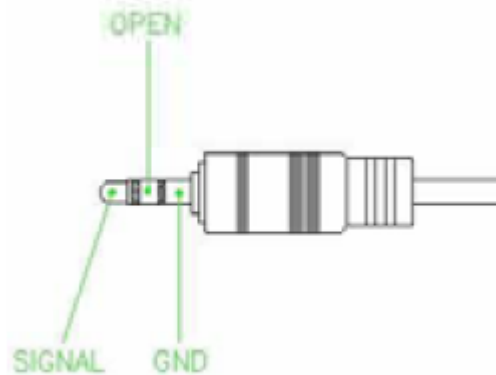
CONTROLS AND CONNECTORS

REAR PANEL

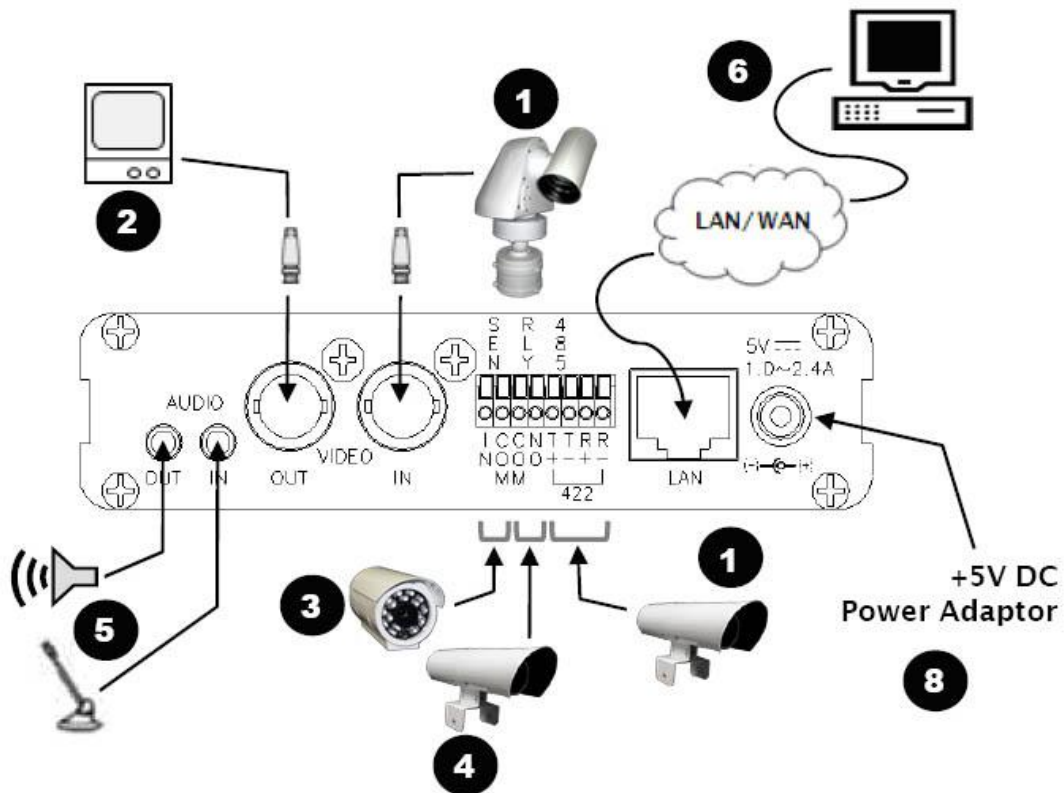
Below is a diagram that outlines the location and description of each connector on the back of the VSMJP24E unit.



NOTE: When connecting the audio input, Use the only stereo phone jack shown below. The mono phone jack may lead to damage of the audio in/out connector.



INSTALLATION

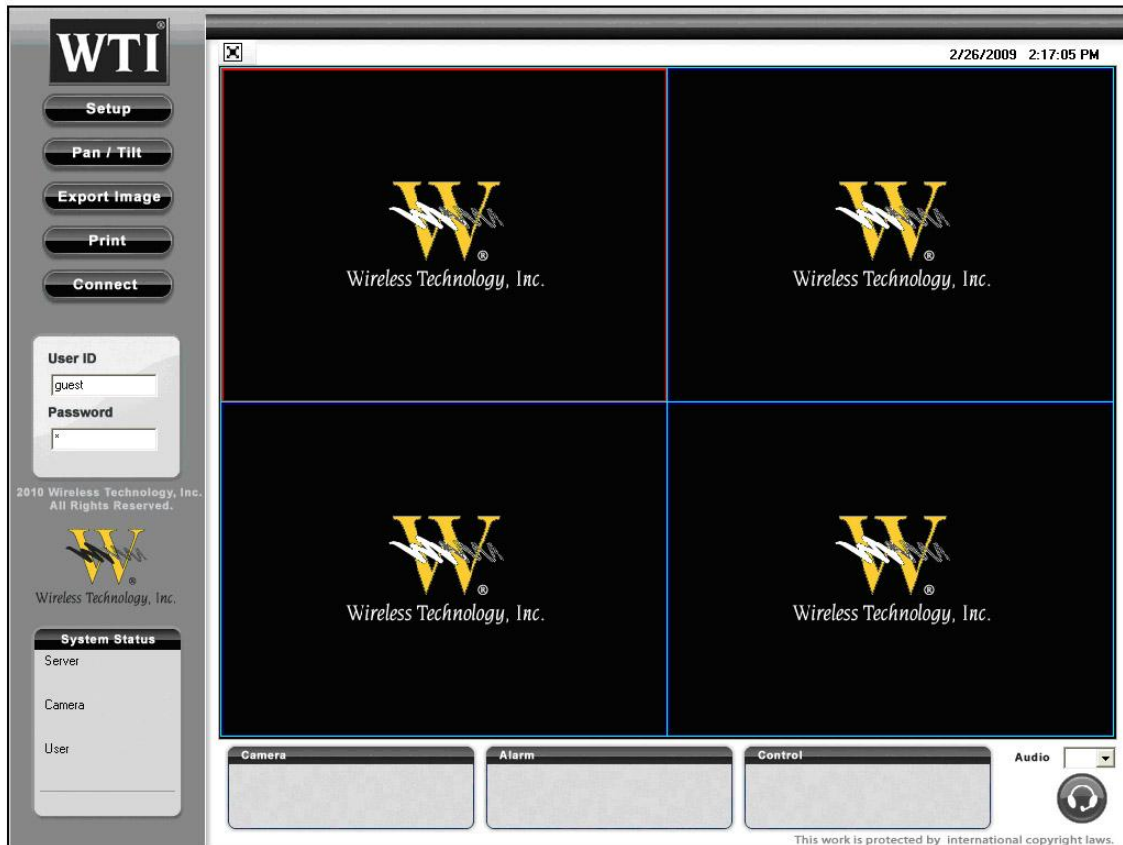


To install the new VSMJP24E unit for the first time, please follow the steps below:

1. Connect the camera to the video input. If required, connect P/T/Z cameras to RS-485/422 connector as well.
2. If required, connect the analog display to the video output (loop back).
3. If required, connect the alarm input device such as a sensor to the alarm signal input.
4. If required, connect the alarm output device such as a buzzer to the alarm signal output.
5. If required, connect the microphone to the audio Input and the speaker to the audio output.
6. Connect the network cable to the network port.
7. Power on all the connected equipment.
8. Connect the +5V DC power adaptor to the +5V DC adaptor input.

IP REMOTE

The IP Remote video server management software packaged with the VSMJP24E allows remote control of the video servers on the user's PC. This program has an intuitive graphical user interface (GUI) that helps users perform a number of powerful functions with only a few clicks. With the IP Remote, users can monitor remote live videos and audios, play back recordings that have been archived on the local PC, export a video feed to the local PC HDD in various formats with digital signature, control PTZ cameras, configure device settings, and much more.



FEATURES:

1. Connect up to 16 channels for the video servers.
2. Simultaneously display up to 16 live channels.
3. Simultaneously search up to 16 channels.
4. Searches recorded video by date, time, and channel.
5. Remote device setup supported.
6. PTZ camera control.
7. Video feeds can be exported in a variety of formats with a digital signature.
8. Notification messages by triggered events.
9. Relays video feeds through emergency alarm.
10. Supports external USB device backup upon disconnection of the video server.

IP REMOTE: INSTALLATION

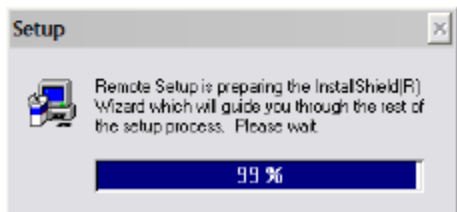
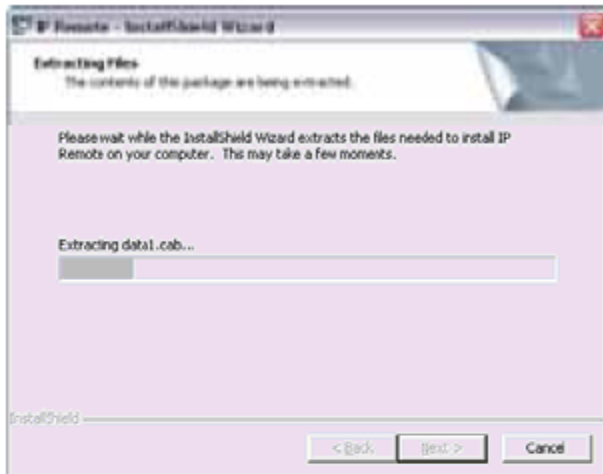
INSTALLING THE PROGRAM

To install the IP Remote software, please complete the following steps:

1. Double-click the SETUP file for the IP Remote.
2. The IP Remote - InstallShield Wizard window appears.



3. Click next.
4. The InstallShield wizard extracts the files needed to install the IP Remote.



IP REMOTE: INSTALLATION

5. After preparing the installation process, the welcome window appears.

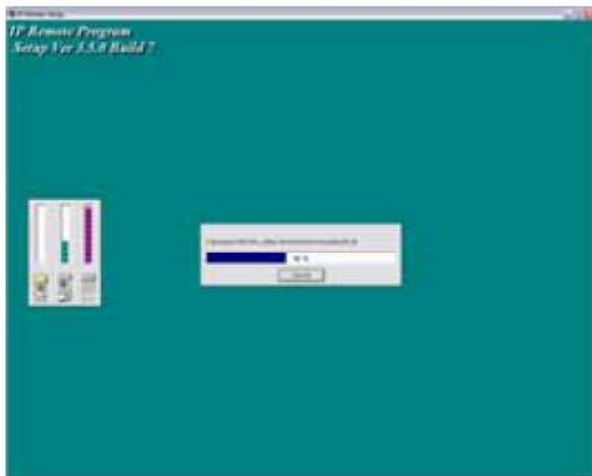


6. Click next.

7. Click the browse button if you want to change the folder where the files will be saved.

8. Click next.

9. The installation process is in progress.



IP REMOTE: INSTALLATION


10. If the IP Remote is correctly installed the following window appears.



11. Congratulations! The installation is complete.

12. Click the Finish button.

RUNNING AND CLOSING THE PROGRAM

To start the IP Remote program, click the  IP Remote icon. The user can find this icon by going Start >> All programs >> DVR >> Remote as shown below.



The following shows that IP Remote first starts. The Local Setup window allows users to add, modify, and delete a video server node they want to monitor and manage. Users can also configure software preferences and manage storage for recordings.

To close the Local Setup window and go to the IP Remote main window, close the Local Setup window by clicking the OK or Cancel button.

To exit the program, click the  or  button on the IP Remote main window.

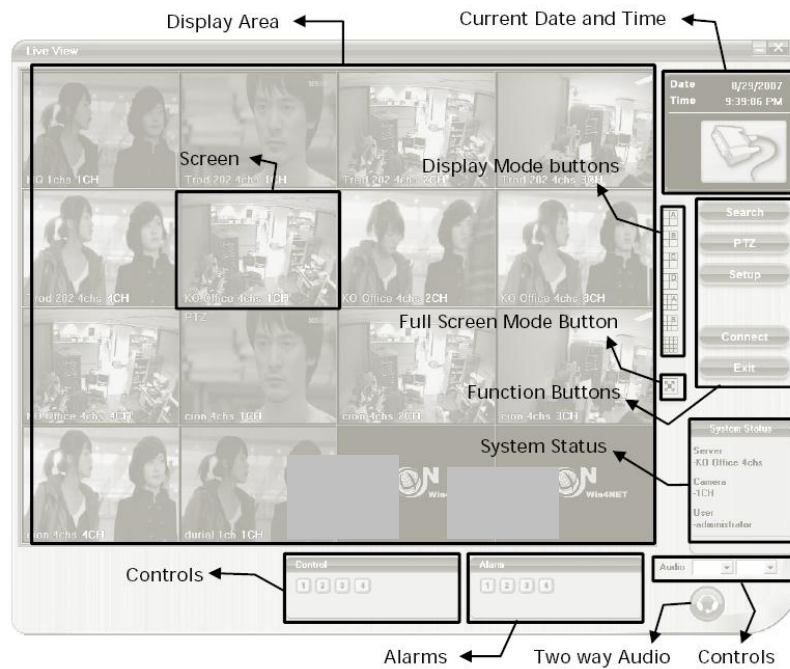
IP REMOTE: ICONS

UNDERSTANDING ICONS

<i>Icon</i>	<i>Description</i>
	A device currently connected.
	A device currently NOT connected.
	Non-active number buttons have a cyan border and are colored white.
	Active number buttons have a blue border and are colored light-blue.
	Non-active screen control buttons are colored gray.
	Active screen control buttons are colored bright-blue.
	Non-active two way audio button are colored cyan.
	Active two way audio button are colored blue.
	Non-active function buttons are colored cyan.
	Active function buttons are colored blue.
	4-split screen mode for page A which has 4 channels, 1 to 4.
	4-split screen mode for page B which has 4 channels, 5 to 8.
	4-split screen mode for page C which has 4 channels, 9 to 12.
	4-split screen mode for page D which has 4 channels, 13 to 16.
	9-split screen mode for page A which has channels, 1 to 9.
	9-split screen mode for page B which has 9 channels, 8 to 16.
	16-split screen mode.

INTRODUCING THE MAIN WINDOW

The main window provides useful function buttons to search recorded videos, control PTZ cameras, configure video server settings, activate two way audio signals, make connections with video servers, and much more. The main window offers each different function for the live view mode and the search view mode.



Display Area contains the screen(s) that:

1. Displays a live video in the live mode.
2. Plays back a recorded video in the search mode.

Screen:

1. Displays the specific channel (camera) transmitted from the Video Server in the live mode.
2. Plays back a specific video saved to the local PC in the search mode.



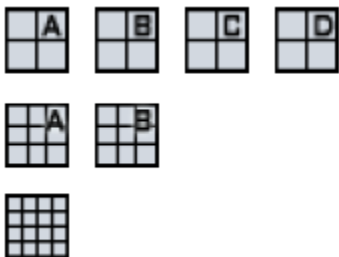
Current Data & Time:

1. Displays the current date and time.
2. Displays a picture of the selected menu items.



Display Mode Buttons:

1. The IP Remote provides users with 7 selections for display mode.

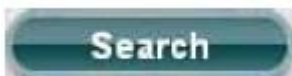


Full Screen Mode:



1. Click to switch to the full screen mode. Users can also right-click within the Display Area to do so.
2. To exit the full screen mode, press the ESC button or right click within the Display Area.

Search:



Click to perform search.

PTZ:



Click to open the PTZ controller.

Setup:



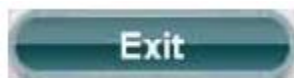
Click to configure the remote device settings.

Connect:



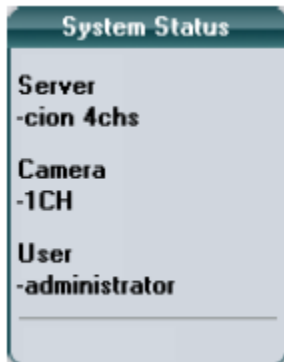
Click to manage video server nodes and storage, and configure program settings.

Exit:



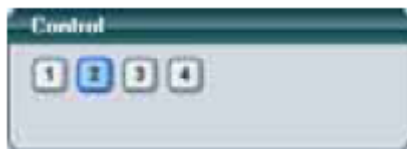
Click to quit the IP Remote program.

System Status:



Displays information relevant to the selected channel such as a server name, camera name, and current login user.

Control:



The status of control (relay) devices or activates/ deactivates control (relay) devices.

Alarm:



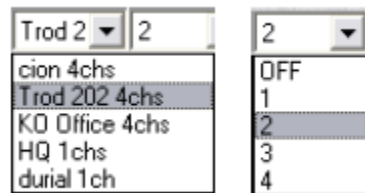
The status of Alarm Devices (Sensors).

Two Way Audio:



When this button is selected, the two way audio function is activated. Users can have a two-way voice communication between a center and a remote site.

Audio:



Select an audio channel to hear sound from the specific site.

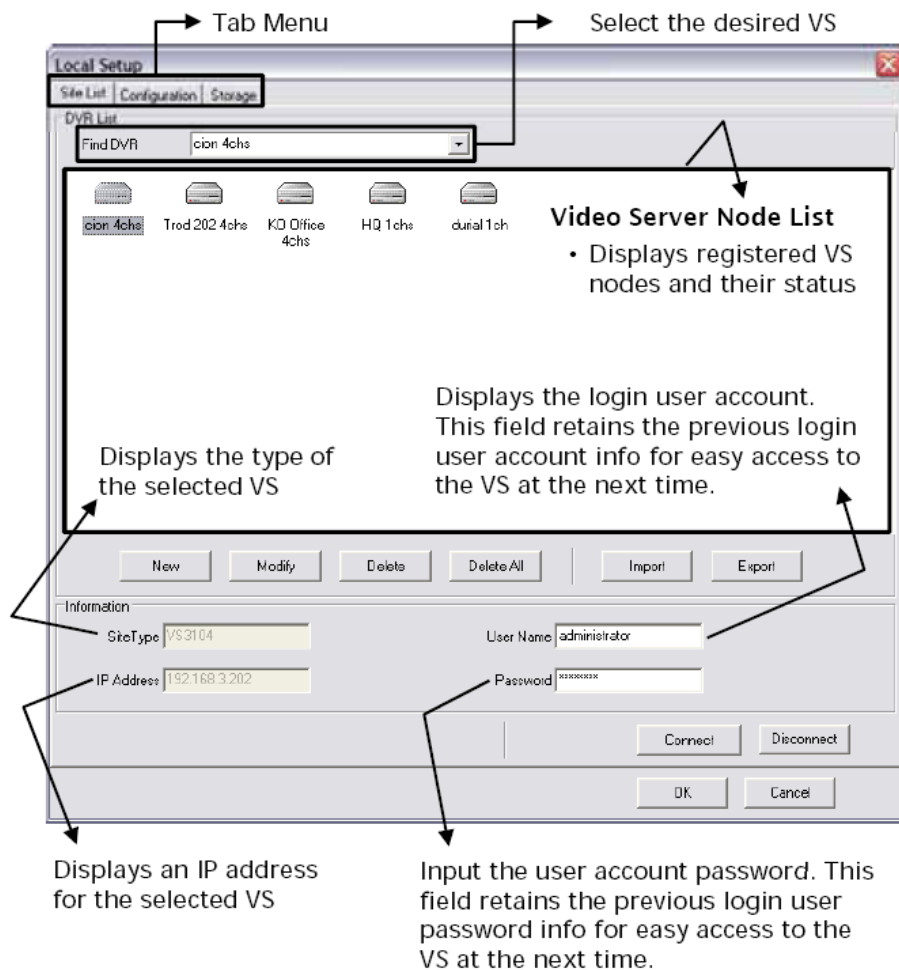
SERVER CONNECTION

MANAGING VIDEO SERVER CONNECTION

The local setup window automatically appears when the IP remote starts. The user can also open the local setup window by clicking the  button. This allows users to add/modify/delete connections, import/export users' preferred connection list, manage storages and configure miscellaneous details relevant to the IP Remote program.

SITE LIST TAB OPTION OVERALL

Under the site list tab menu, users can manage video server nodes and establish a connection for each video server.



NOTE: By factory default, the “administrator” account is given to the VSMJP24E and its password is <blank>. Also, The IP Remote allows the user to change the password for the “administrator” in the Setup.

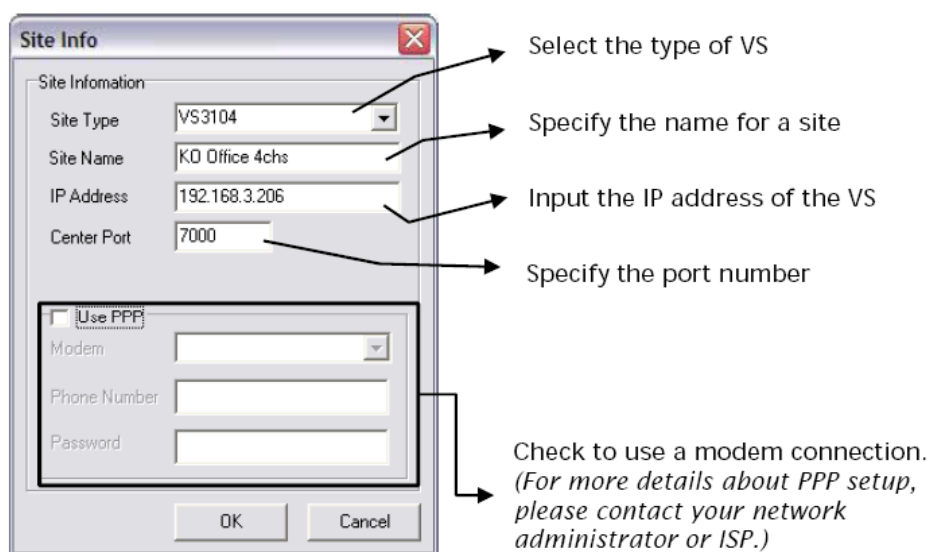
SERVER CONNECTION: VS NODE

CREATING/MODIFYING/DELETING VS NODE

To add a new video server node, complete following steps:

1. Click the New button.
2. The site info window appears.
3. Fill in the fields on the site Info window above.
4. Click the OK button.
5. The created node appears on the video server node list.

To update the registered video server node, follow those steps below:



1. Click the Modify button after selecting the existing node.
2. The site info window appears.
3. Modify the desired field(s) on the site info window above.
4. Click the OK button.
5. The created node appears on the video server node list.

To delete the registered video server node, follow those steps below:

1. Select one of video server nodes on the video server node list.
2. Click the delete button.
3. The selected video server node disappears from the video server node list.

CONNECTING AND DISCONNECTING VS NODE

To connect a video server node, double click the desired video server node. Otherwise complete the following steps:

1. Select one of video server nodes on the list with a mouse pointer.
2. Type the username and password in the user name and password fields.

SERVER CONNECTION: VS NODE

NOTE: By factory default, the “administrator” account is given to the VS and its password is <blank>. Also, The IP Remote allows the user to change the password for the “administrator” in the Setup.

3. Click the connect button.
4. The local setup window will be closed and the live video(s) transferred from the connected video server will be displayed on the display area.

To disconnect a video server node, complete the following steps.

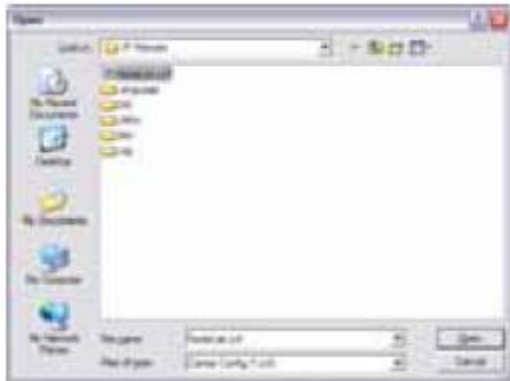
1. Select one of video server nodes on the List with a mouse pointer.
2. Click the disconnect button.

3. The video server node icon  is changed into .

VS NODE LIST INFO IMPORT AND EXPORT

Users can import the node list from a saved file. To do so, please follow those steps below:

1. Click the import button.
2. The open dialog box appears.

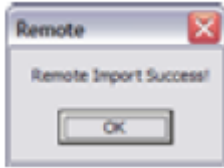


3. Select a file you want to import and click the open button.

SERVER CONNECTION MANAGEMENT

MANAGING VIDEO SERVER CONNECTION

1. The success message box shown below pops up.



2. Click the OK button.

3. You will notice saved configurations are reflected on the video server node list.

Users are allowed to export the current node list to an external file. To do so, please complete the following steps:

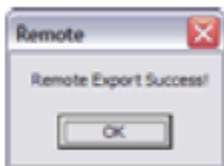
1. Click the export button.

2. The save as dialog box appears.



3. Type your preferred name for a file and click the save button.

4. The success message box shown below pops up.



5. Click the OK button.

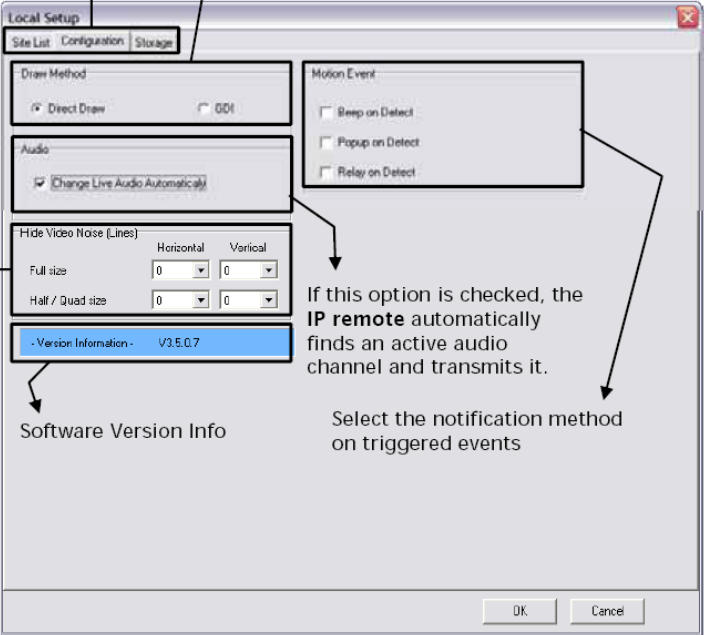
CONFIGURATION

PROGRAM SETTINGS

The local setup window automatically appears when the IP remote starts. The user can also open the local setup window by clicking the  button. This allows users to add/modify/delete connections, import/export users' preferred connection list, manage storages and configure miscellaneous details relevant to the IP Remote program.

CONFIGURATION TAB OPTION

In the configuration menu option, users are allowed to set preferences for the IP Remote software.



Tab Menu

Select one of methods to display graphical objects on the screens. For high drawing performance, the **Direct Draw** should be selected.

Local Setup
Site List Configuration Storage

Draw Method
 Direct Draw GDI

Audio
 Change Live Audio Automatically

Hide Video Noise (Lines)
Full size Horizontal: 0 Vertical: 0
Half / Quad size Horizontal: 0 Vertical: 0

- Version Information - V3.5.0.7

Software Version Info

Motion Event
 Beep on Detect
 Pop up on Detect
 Relay on Detect

If this option is checked, the **IP remote** automatically finds an active audio channel and transmits it.

Select the notification method on triggered events

Define an amount to remove the specified number of lines starting from outline. The user can use this option when there are distorted lines noticed on the screens.

- Full size is for high resolutions (720x480, 640x480)
- Half /Quad size is for low resolutions (720x240, 360x240 or CIF size)

OK Cancel

MANAGING STORAGE

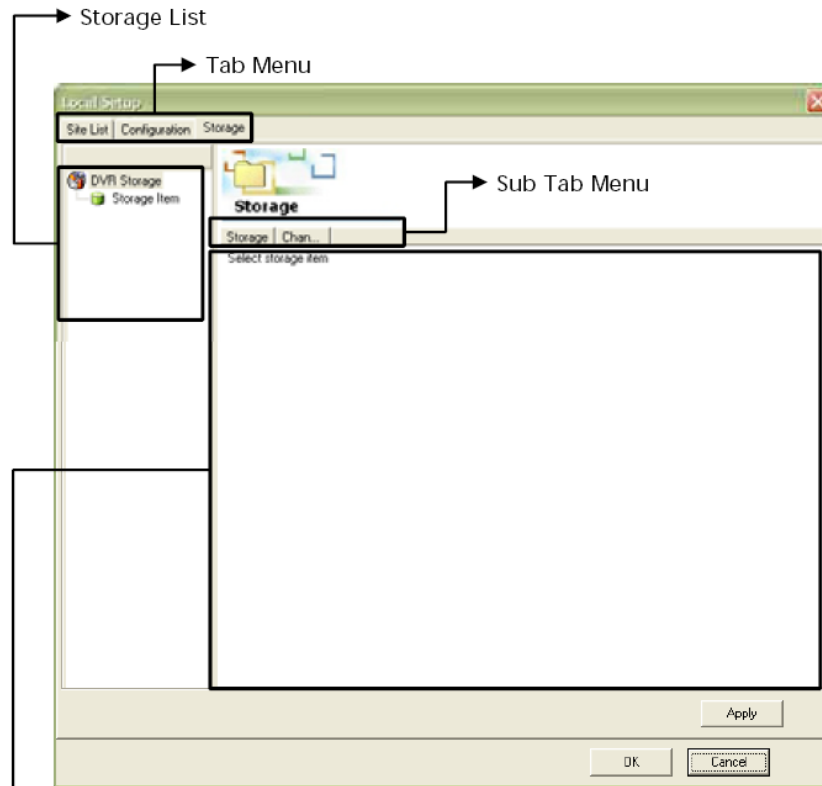
The local setup window automatically appears when the IP remote starts. The user can also open the local setup window by clicking the  button. This allows users to add/modify/delete connections, import/export users' preferred

CONFIGURATION

connection list, manage storages and configure miscellaneous details relevant to the IP Remote program.

STORAGE TAB OPTION OVERALL

Not only can users manage storage for recorded data, but users can also plan recording schedule in this tab option.



Configuration Pane

- This pane offers users 4 sections to configure settings related to recordings. The 1st tab **Channel Bind**, enables the user to fasten each channel(camera) to the particular storage channel. The 2nd tab **Disk Info** allows the user to allocate the local HDD space for recorded data. The user can also make recording schedule on the 3rd tab **Recording Schedule**. On the last tab **Motion** the user can assign the desired motion detection regions for the individual live channel(camera).

CONFIGURATION

ADDING NEW STORAGE

To add a new storage item, complete the following steps:

1. Right click within the storage list pane.



2. This context menu -  - pops up.


3. Click the add storage button.

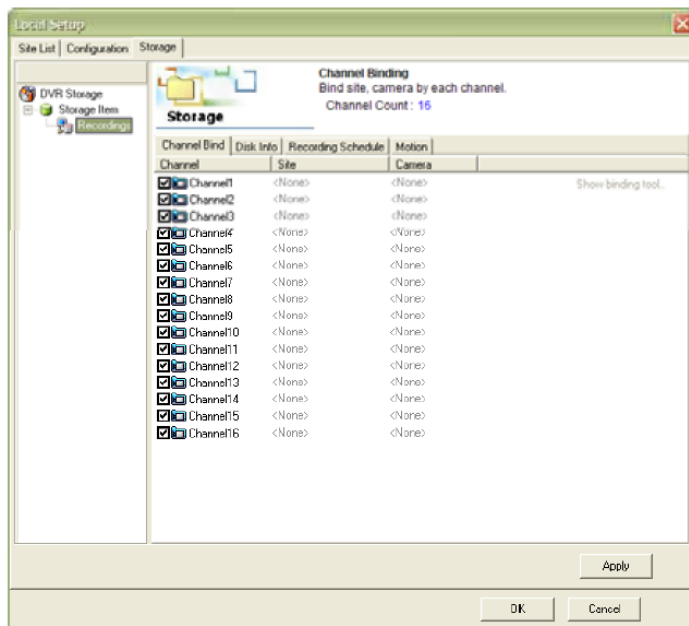
4. The new storage dialog box appears.



5. Fill out the fields for a storage name and the number of channels.

6. Click the OK button.

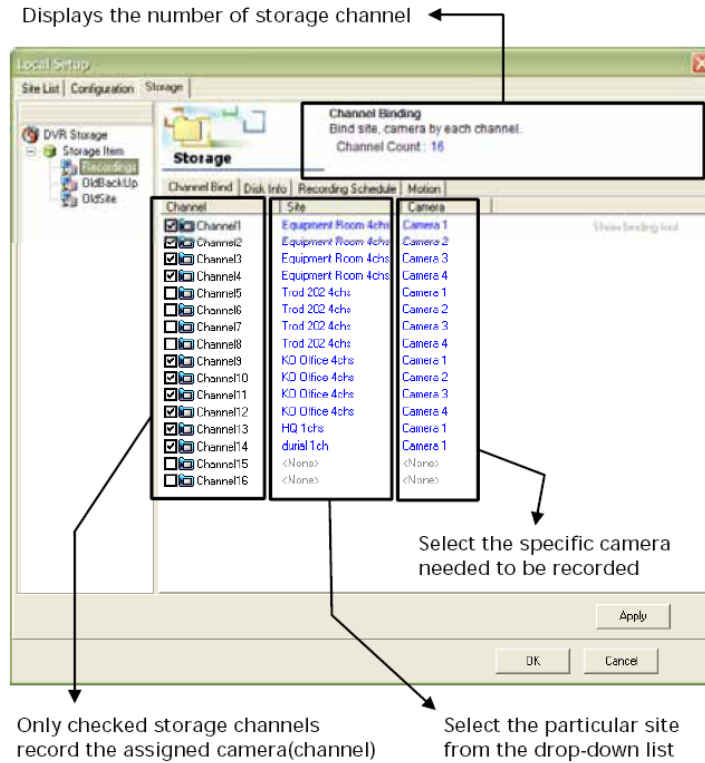
7. There is a new storage item -  - added under the storage item - . The user will also notice a list of storage channels on the configuration pane.



MANAGING STORAGE

CHANNEL BINDING

The channel bind option allows users to assign the preferred camera (channel) of the particular site. The selected camera (channel) live video data will be saved to the associated storage channel.



DISK MANAGEMENT

On this tab, users can allocate a storage space to the local HDD. The following steps explain how to manage storage:

1. Select one of local disk drives.
2. Click the desired point within the slide bar to allocate a space of storage.
3. Click the assign disk to storage button.
4. Click the apply button to save changes.

MANAGING STORAGE

The allocation info will be reflected and displayed.

Establish new disk space to allocate in storage
 Disk Capacity : 37,452 MB MByte
 Disk Free : 37,364 MB MByte

Storage

Channel Bind | Disk Info | Recording Schedule | Motion

Drive Name : DVR (E:)
 Total : 37,451 MByte

Used Space : 87 MByte
 Recorded : 0 Unit
 Free Space : 37,364 MByte
 New Space : 26260 MByte
 New Unit : 202 Unit

Maximum space that can be allocated
 37,364 MByte(Max 287 Unit)

Mouse down to allocate Storage(Unit)
 70%(202 Unit)

Assign Disk to Storage

Drive	Current record space	Allocated space	Free space
System (C:)	0 MB(0 Unit)	12,307 MB	86,668 MB
Data (D:)	0 MB(0 Unit)	18,996 MB	79,978 MB
DVR (E:)	0 MB(0 Unit)	88 MB	37,364 MB

Step #1 Step #2 Step #3

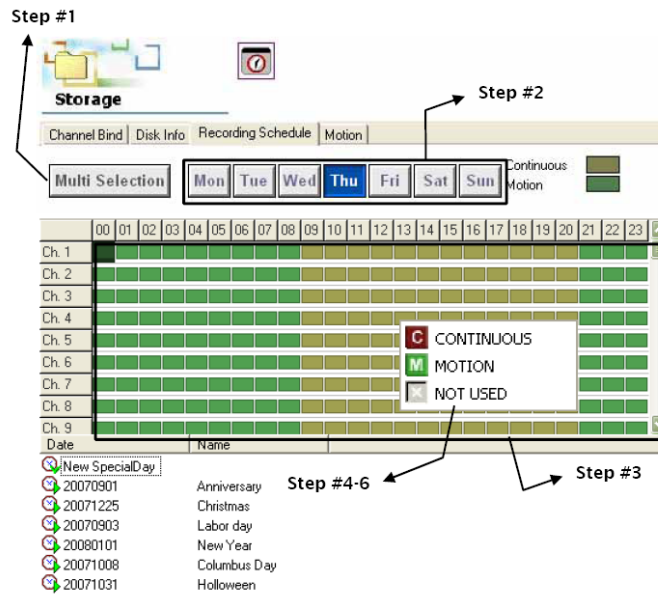
The allocation info will be reflected and displayed.

RECORDING SCHEDULE

Users can plan recording schedule for an individual day, it is also possible for multiple days at one time. To make a schedule, follow those steps below:

1. Choose one between multi-selection and single-selection.
 - a. Multi-selection: allows users to set a schedule for multiple days.
 - b. Single-selection: allows users to set a schedule just for one day.
2. Click the day(s) that you want to schedule.
3. Highlights the desired time cell(s) by clicking or drag-and-dropping.
4. Right click the selected time cell.
5. The context pop-up menu appears.
6. Select the desired recording method.
 - a. CONTINUOUS: Select to continuously record a live video.
 - b. MOTION: Select to record a live video only when motion is detected.
 - c. NOT USED: Select to cancel the assigned recording schedule.
7. Click the apply button to save the changes.

MANAGING STORAGE

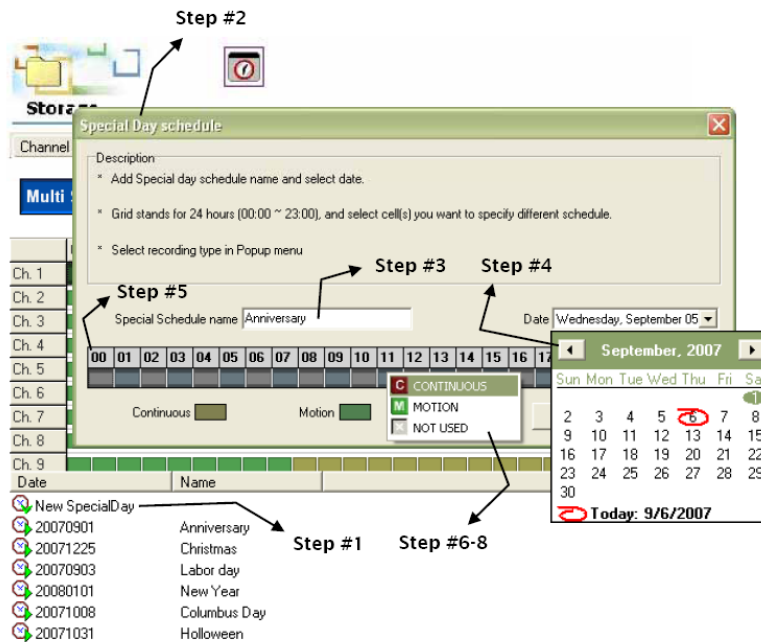


Using the new special day option users can add a new schedule as a special option; days like holidays and days they want to plan non-routine recording schedules.

To register a new special day, complete the following steps:

1. Double click the new special day button.
2. The special day schedule window appears.
3. Type the preferred name.
4. Choose a date from the calendar.
5. Highlights the time cell(s) by clicking or by drag-and-dropping.
6. Right click the selected time cell(s).
7. The context pop-up menu appears.
8. Select the recording method.
9. Click the OK button.

MOTION DETECTION



MOTION DETECTION AREA ACTIVATING MOTION DETECTION AREA

The IP Remote allows users to activate up to 5 particular areas to detect suspicious movement from the specific camera (channel). When movement is detected on the assigned areas of the screen, the program causes a motion event and the associated camera (channel) can be recorded according to the recording schedule. To activate motion detection areas complete the following steps:

1. Select the desired channel (camera) from the channel list.
2. Click where you want and drag to draw an area with holding a mouse left button.
3. Release the mouse left button to end the area.
4. Set the desired value for those options:
 - a. Motion Sensitivity: value for the motion detection sensitivity
 - b. Motion Pre-Alarm: The number of seconds the IP Remote records before motion is detected.
 - c. Motion Post-Alarm: The number of seconds the IP Remote records after motion is detected.

MOTION DETECTION



LIVE VIEW

The live view mode enables users to watch video feeds transferred from the connected video servers. In this section, users will learn how to examine live screens and how those operate.

LIVE SCREEN

The live screens display real-time video transferred from the connected video servers. The OSD (On Screen Display) with each live screen represents a variety of status information such as current time, name for video server node, and much more.




This box will appear when motion is discovered in the activated motion detection area.

PTZ :

1. Represents whether PTZ function is active or NOT.

Recording indicator:

1.  - The camera(channel) is being recorded.

2.  - The camera(channel) is NOT recorded, but it will be recorded when motion is discovered in the pre-assigned motion detection area(s).

3. No indicator – no recording mode is activated.

Site Name :

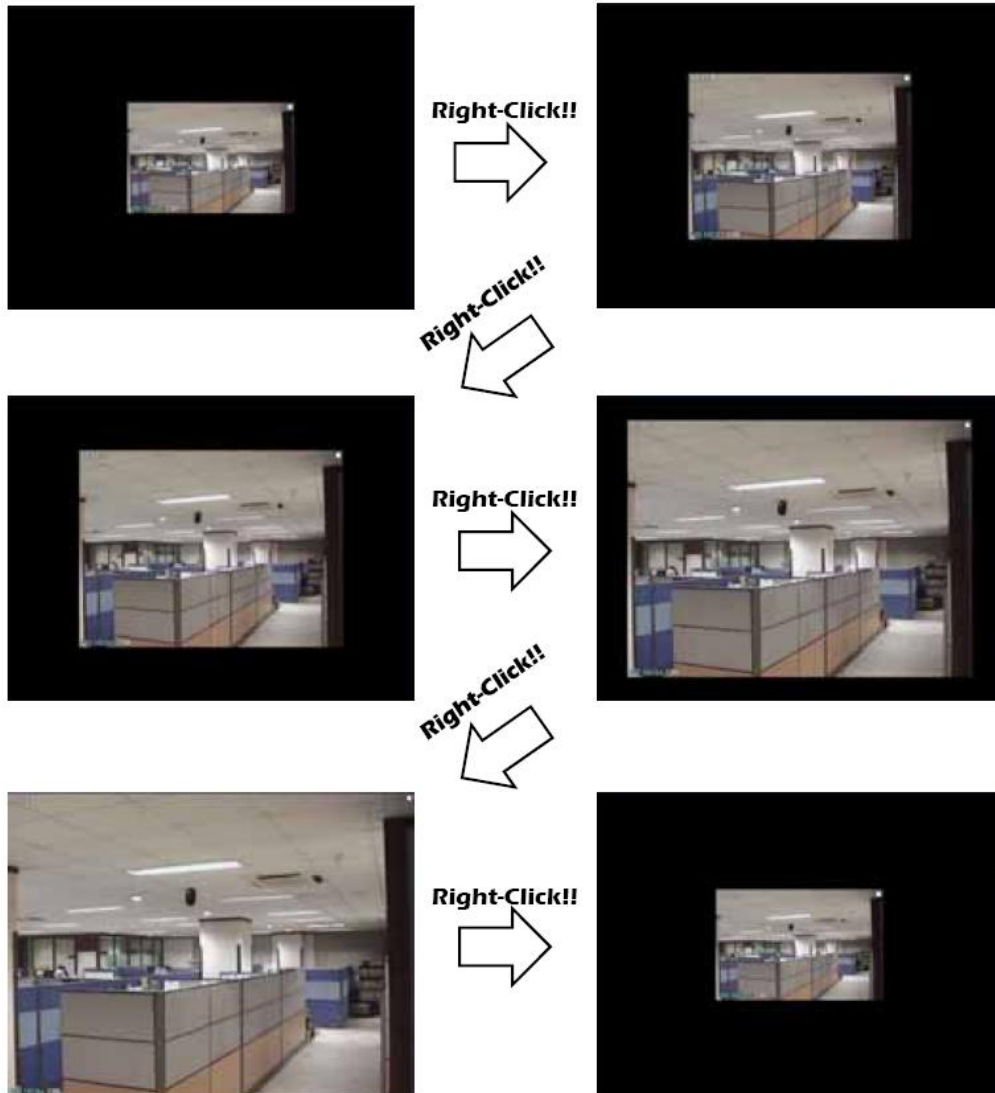
1. Represents the connected site (video server) name the user has specified.

Camera Name :

1. Represents the camera (channel) name the user has specified.

SINGLE SCREEN DISPLAY MODE

The IP remote allows users to view only one desired camera (channel) in the single display mode by double clicking it. Users can also return to the previous display mode by double clicking the screen or press the ESC button on the keyboard. In the single display mode, the camera image can be displayed larger by right clicking the screen as shown below; if the user presses the ESC button that image will return to its original size.



FULL SCREEN DISPLAY MODE



To switch to the full screen mode, click the  button or right click within the display area. Users can also exit the full screen mode, press the ESC button or right click the display area.

SEARCH



Right-Click!!
Click!!  

 Right-Click!!
Press ESC



SEARCH STARTING SEARCH

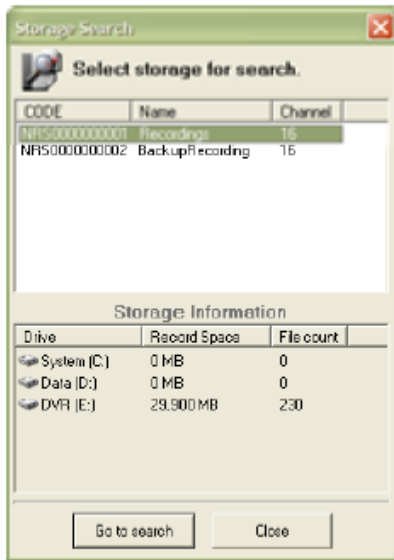
The IP camera provides a function to record and save live videos to the local HDD(s). Archived video data can be searched and monitored at a later time. In the search mode, users are allowed to find the specific section of recordings in various ways.

GOING INTO THE SEARCH MODE

To go to the search mode follow these steps below:



1. Click the  button in the live mode.
2. The storage search window appears.

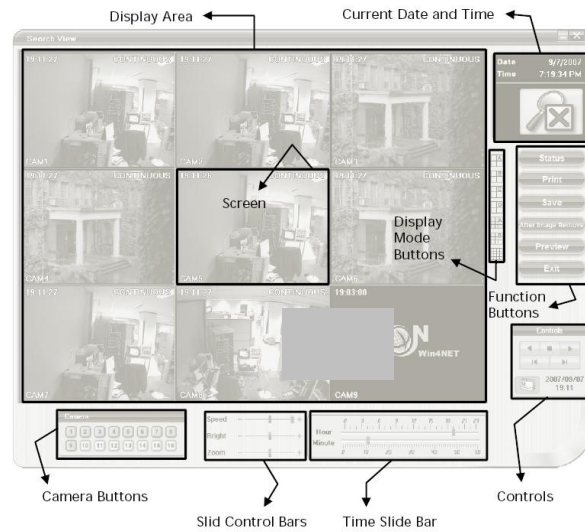


3. Select a storage you need to search from the list.
4. Click the go to search button.
5. The search main window shown below appears.


SEARCH MAIN WINDOW

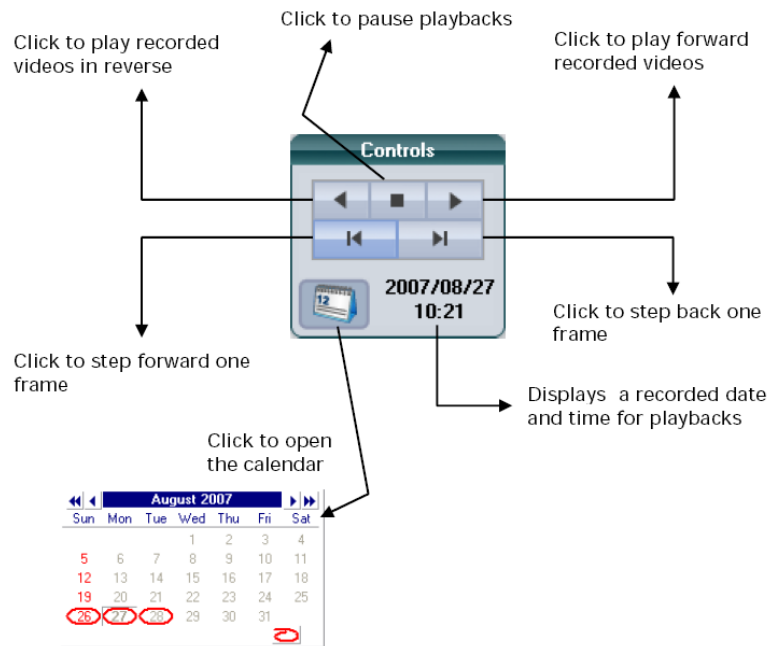
INTRODUCING THE SEARCH MAIN WINDOW

The camera (channel) screen in the search main window operates the same as in the live main window, so the camera screen explanation will not be repeated.



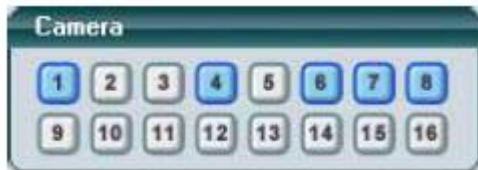
CONTROLS

The controls display the current date and time and allows users to control the playback(s) in a various way. When the users click the calendar icon, the calendar will appear and allows users to select the desired date to search. The date marked in red circle -  - contains recorded video.




CAMERA BUTTONS

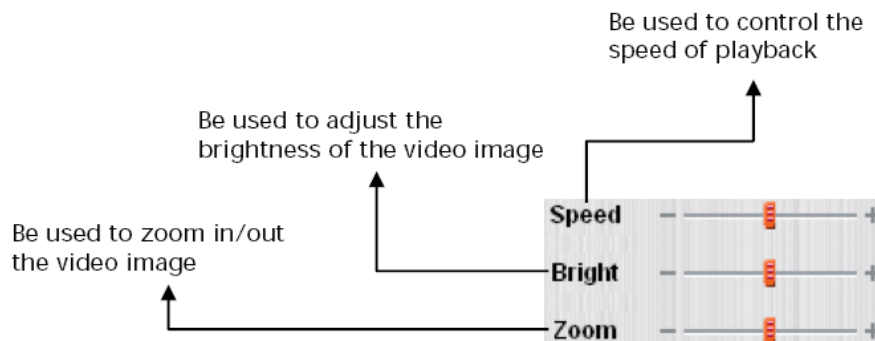
Users can select more than one channel to monitor recorded videos from the camera buttons. The IP Remote will simultaneously play back a number of recordings. The screen display mode automatically changes to display all channels selected.



SLIDE CONTROL BARS


The slide control bars enables users to control the playback speed, adjust the brightness of the recorded video, and zoom in/out the video image. To operate the slide control bars:

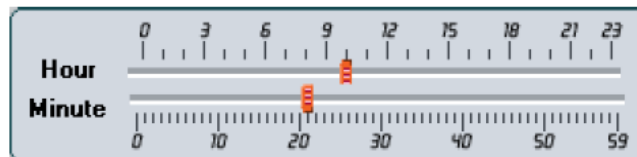
1. Move the mouse pointer on the slide indicator - .
2. Hold it by pressing the mouse left button.
3. Drag and drop it down on the desired position.



TIME SLIDE BAR


With the time slide bar, users can choose the particular time to quickly find the section of recorded video. To operate the time slide bar:

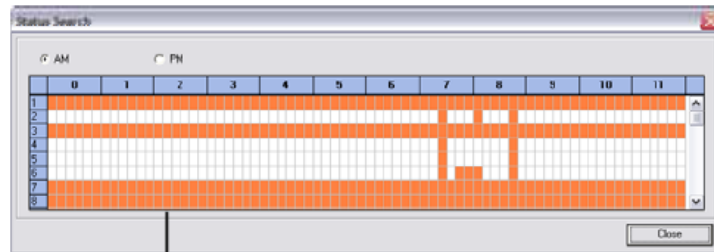
1. Move the mouse pointer on the slide indicator - .
2. Hold it by pressing the mouse left button.
3. Drag and drop it down on the desired position.



STATUS SEARCH

Users can load the particular section of recording in the single display mode by completing the following steps:

1. Click the  button.
2. The status search window appears.



A orange cell stands for a time which has recorded video data


3. Select the specific time cell to access that part of a recording.
4. Click the close button.
5. The selected section of recording is played back.



PRINT

Under the search mode, users can print an image currently displayed on the search display area.

To print an image out:

1. Select only one desired camera (channel) from the camera buttons.
2. Choose the desired image using the playback controls.
3. Click the  button to pause a playback.

4. Click the  button.

NOTE: To use the Print option, a printer must be correctly installed with the PC.

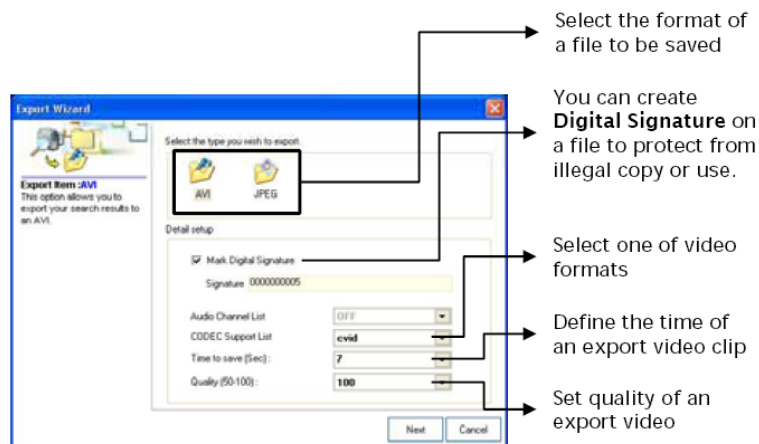
EXPORT

The save function button allows users to export the desired image in the .JPEG format and the user can also convert the specific part of recorded video in the .AVI format. In addition, a digital signature can be added to exported files.

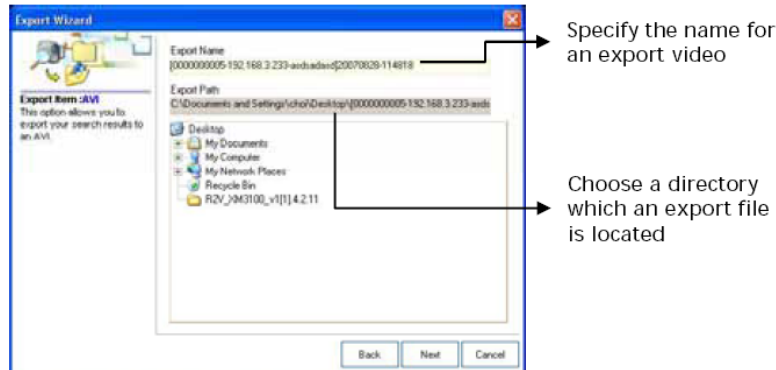
- *Digital Signature:* Paper money has an image seen only when light is shined through it. Such a printing technique is called a watermark. The watermark cannot be created by a printer or copier so the technique is used to protect from counterfeit. Digital security also uses similar kind of technique called a digital signature. When a user checks the mark digital signature option, a digital signature will be applied to the file. If a digital signature marked file is altered, the digital signature will be damaged. The digital signature is only visible through a specific application. A digital signature has to be included in important files such as those submitted for legal purposes.

To export recorded video, follow those steps below:

1. Click the  button.
- 2 The export wizard appears.



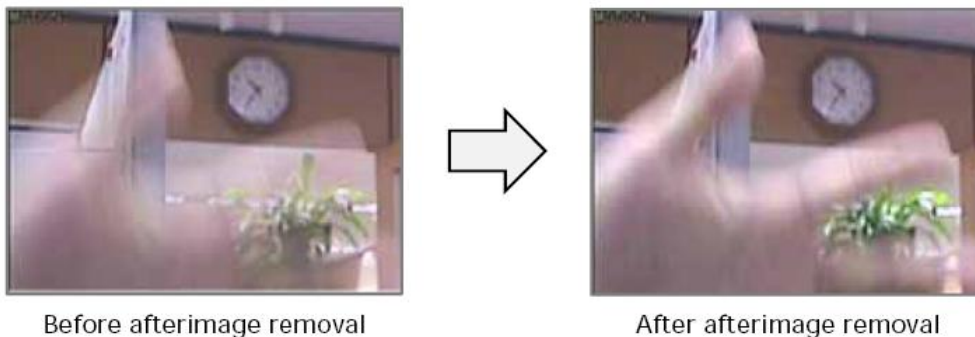
3. Decide a selection for the fields on the window above and click the Next button.
4. The following window appears:



5. Fill out the fields and click the Next button.
6. Exporting process is in progress.
7. Click the finish button after the process is complete.
8. The exported file is saved to the pre-defined directory.

AFTERIMAGE REMOVAL

The IP Remote is capable of recording video using one of three different resolutions (360x240, 720x240, 720x480 in NTSC). In the 720x480 resolution, two images (frames) are mixed. Because of the timing gap between even and odd signal, according to the standardized image rules, afterimage might occur to high speed moving images. The afterimage remove function button allows users to remove this phenomenon and displays clear images.




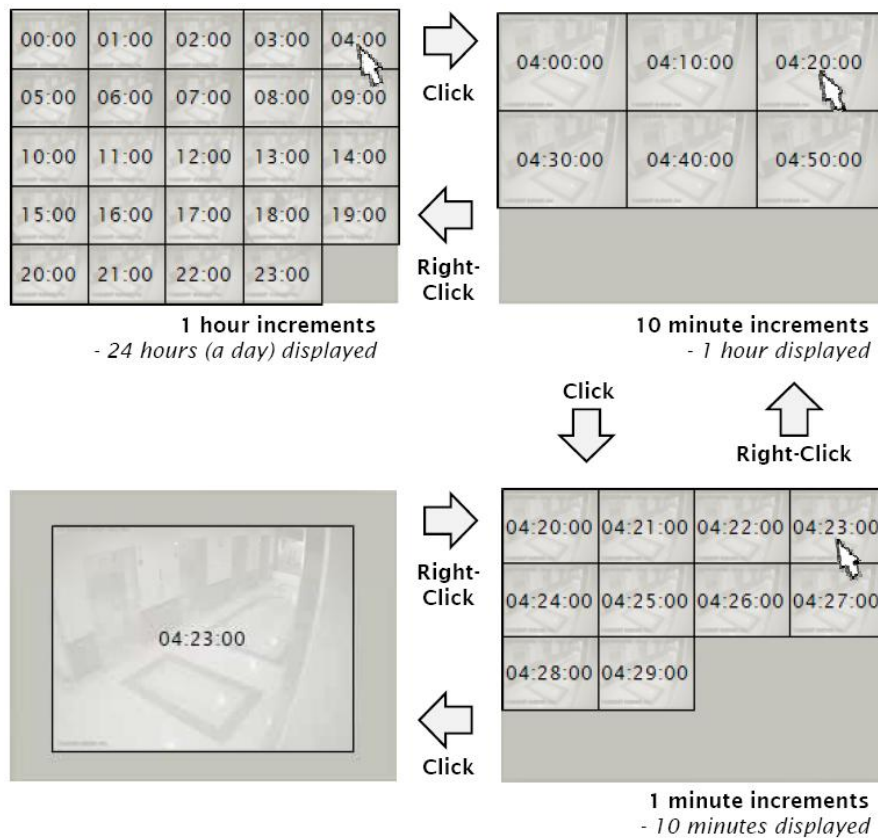
PREVIEW SEARCH

With the preview function, users can quickly find an exact moment where an event occurred. The preview search basically displays a 24 hour visual overview of a single channel (camera) by separating a 24 hour period (1 day) into 24 images, one image for each hour of the day. The search can be narrowed down into an hour and a 10 minute period.

PREVIEW

To perform the preview search, please follow the steps below:

1. Select the desired camera (channel) from the camera buttons.
2. Select the desired date seeking through the calendar.
3. Click the  button.
4. The 24 images for each hour for a selected day will be displayed on the search display area.
5. Search to find the specific part of video with the controls.




EXIT

To exit the search mode and return to the live mode, click the  button.

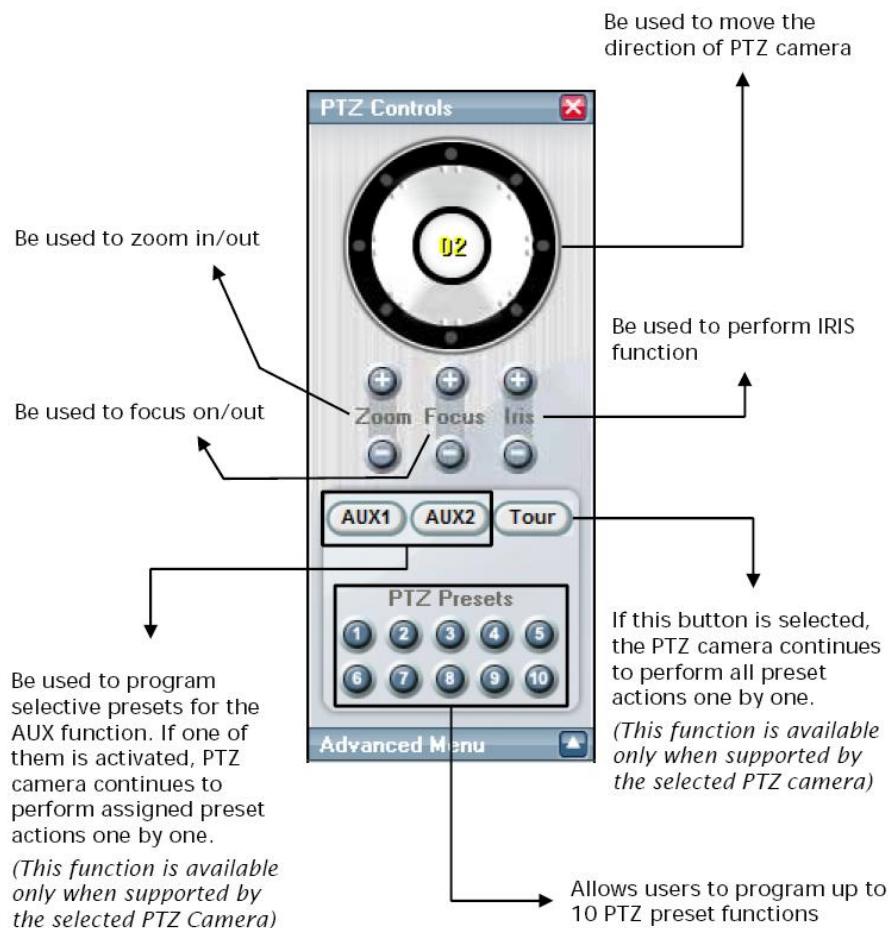
PTZ CONTROLLER

The IP Remote allows users to control PTZ camera from anywhere connected to the internet. This section explains how to operate the PTZ controller.



BASIC PTZ CONTROLLER

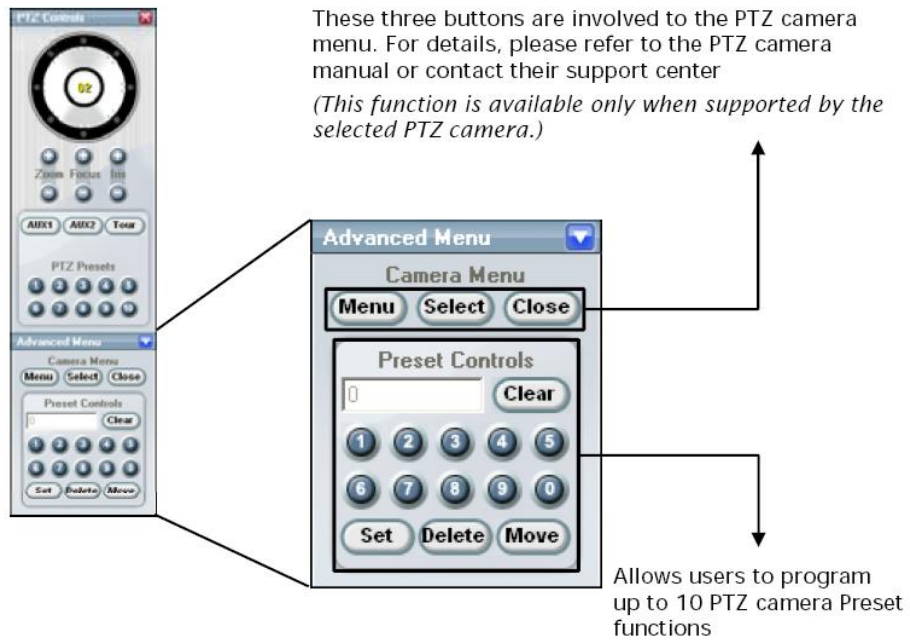
When users click the  button, the PTZ controller will appear as shown below. With the basic PTZ controller the user can perform basic functions of PTZ camera such as zoom in/out, focus on/out, IRIS, presets, and more.

To expand its advanced menu, click the  button.



ADVANCED PTZ CONTROLLER

When users click the  button, the PTZ controller will be expanded to the advanced mode. To return to the basic mode, click the  button.



Users are allowed to program a PTZ camera preset function by completing the following steps:



1. Set the selected PTZ camera to the desired position.
2. Input the preferred preset number using the keypad shown below.
3. The input number is displayed on the text bar as shown below.



4. Click the set button.



To check if the preset function is correctly programmed:

1. Move the selected PTZ camera to different position as shown below.



2. Input the preset number you want to examine.
3. Click the move button.



4. The PTZ camera performs the pre-assigned action on the preset number 2 as shown below.

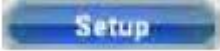


To remove the pre-assigned preset function, complete the following steps:

1. Input the preset number you want to remove.
2. Click the delete button.

CAMERA

The IP remote provides numerous powerful functions that enable users to remotely configure video servers, PTZ cameras, and settings relevant to events.

To open the video server setup window, select the desired live feed transmitted from the specific video server that the user wants to control and click the  button.

SELECTING THE SPECIFIC CAMERA

Select Camera: Select the desired camera.

Camera Name: Specify the meaningful name for the selected camera.

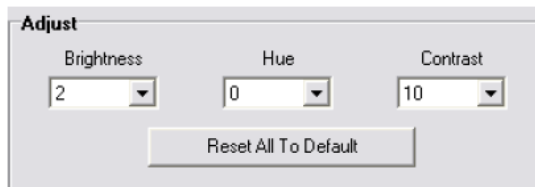
Motion Group: Select the specific number for separately activating the motion detection area.

Screen:

1. Drag to draw motion detection boxes.
2. Click to select one motion detection box.
3. Double click to deselect the activated motion detection box.

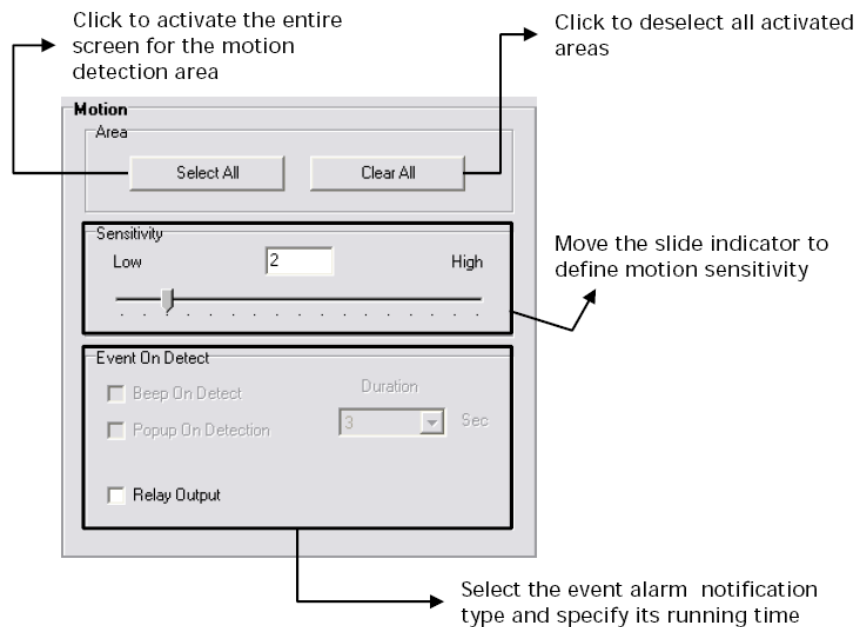
ADJUST

Users can adjust the value of brightness, hue, and contrast for the selected camera. To retrieve default values for three items, click the reset all to default button.



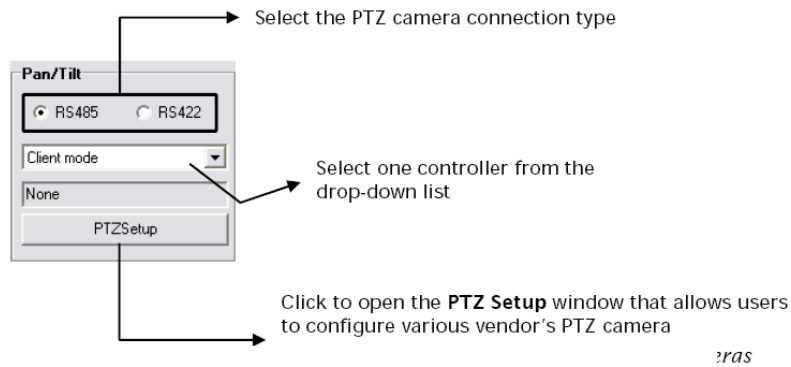
MOTION

The motion section allows users to activate the entire screen of the selected camera for motion detection area. To deactivate the assigned areas at once, click the clear all button. The user can also control motion sensitivity and set up event alarm notification method.

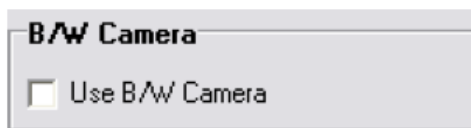


PAN/TILT

Users can choose the type of PTZ connection and set PTZ camera functions.

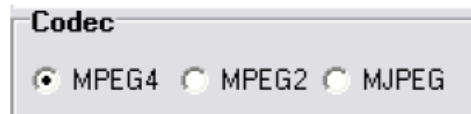


B/W CAMERA



Check this option when the user uses a black and white camera.

CODEC



Select the type of codec for video streams that are transferred from video servers.

FRAME RATE

When the user clicks the Set Frame Rate button, the Recording Schedule window will appear. On this menu section, the user can define the different frame rate for each camera's function.

The **Recording Schedule** dialog box contains the following elements and annotations:

- Frame Status Table:**

Camera	Live	Display	Recording	Quality	Resolution
1	30	0	0	SUPER FINE	360x240
2	30	0	0	SUPER FINE	360x240
3	30	0	0	NORMAL	360x240
4	15	0	0	FINE	360x240
- Camera No. 1 Detail:**

Camera No.	Live	Transfer	Record	Quality	Resolution
1	30	0	0	SUPER FINE	360x240
- Slide Navigators:**
 - Live frame:** A slider from 0 to 30. Annotation: "Move the slide navigator to define the frame rate for live videos".
 - Transfer frame:** A slider from 0 to 15. Annotation: "Move slide navigator to define the frame rate for live videos will be transferred. This value cannot be higher than Live Frame".
 - Record frame:** A slider from 0 to 30. Annotation: "Move the slide navigator to define the frame rate for videos that will be recorded. This value cannot be higher than the Transfer Frame value".
- Buttons:** "Set Default", "OK", "Close". Annotation for "Set Default": "Click to retrieve the default values for each field".

SENSOR

With the sensor tab menu options users can bind the specific sensor to options, the channel and control (relay) device. When a sensor event occurs, the linked relay device will perform its action and the IP Remote will send the event alarm notification to the registered server.

The **Sensor** configuration dialog box includes the following elements and annotations:

- Use:** Four checkboxes labeled 1, 2, 3, and 4, all checked. Annotation: "Check to activate the specific sensor(s)".
- Type:** Four buttons labeled NO, NC, NO, and NC. Annotation: "Click to select the type of the sensor".
- Delay(sec):** Four input fields, each containing the value 5. Annotation: "the sensor ignores another events for pre-defined duration time".
- Relay:** Four dropdown menus labeled 1, 2, 3, and 4. Annotation: "Select the specific relay channel to link the selected sensor".
- Duration(sec):** Four input fields, each containing the value 5. Annotation: "The relay device performs its action for pre-defined duration time".

RELAY ACTIVATION TIME

This menu options allows users to set the period of time for relay device activation.

Use	Name	Active Time
<input checked="" type="checkbox"/>	Siren	20:00 ~ 7:50
<input checked="" type="checkbox"/>	Siren	20:00 ~ 7:50
<input checked="" type="checkbox"/>	Buzzer	20:00 ~ 7:50
<input checked="" type="checkbox"/>	Buzzer	20:00 ~ 7:50

Assign the time range. The relay device operates only during the pre-defined time period.

Specify the meaningful name for each relay device

Check to activate the specific relay device(s)

SENSOR EVENT SERVER

The IP Remote transmits the triggered sensor events to the registered video server(s).

Sensor	IP address	Port
Sensor 1	192.168.2.20	7000
Sensor 2	192.168.2.21	7000
Sensor 3	192.168.2.22	7000
Sensor 4	192.168.2.23	7000

Specify the address of a video server to which the user want to send

Specify the port number of a video server through which sensor event message is sent

SENSOR CONNECTION

Users can link the specific channel to the desired sensor.

Select the desired channel

Select Camera No. 1CH

Linked Sensor No.

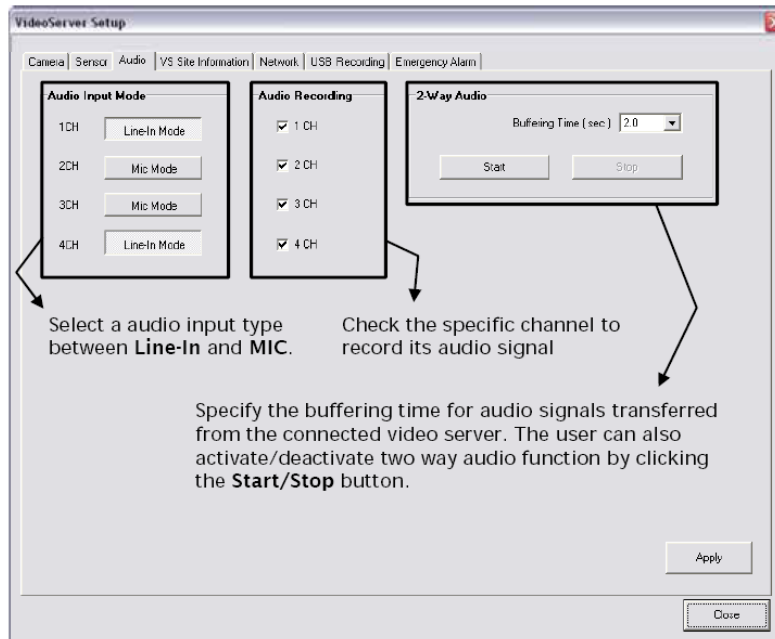
None 1 2 3 4

Select the specific sensor to be linked to the channel

AUDIO

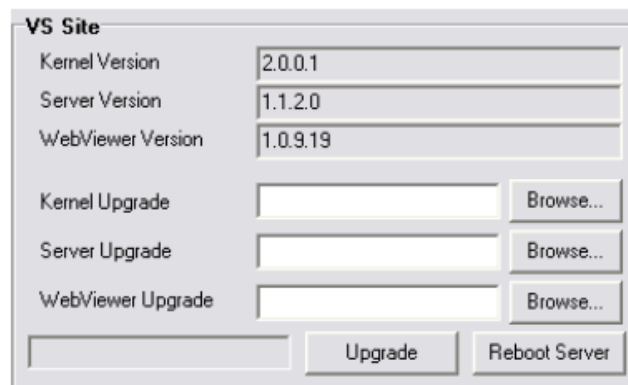
In this section users can configure settings for audio functions and activate two way voice communications.

AUDIO OPTIONS



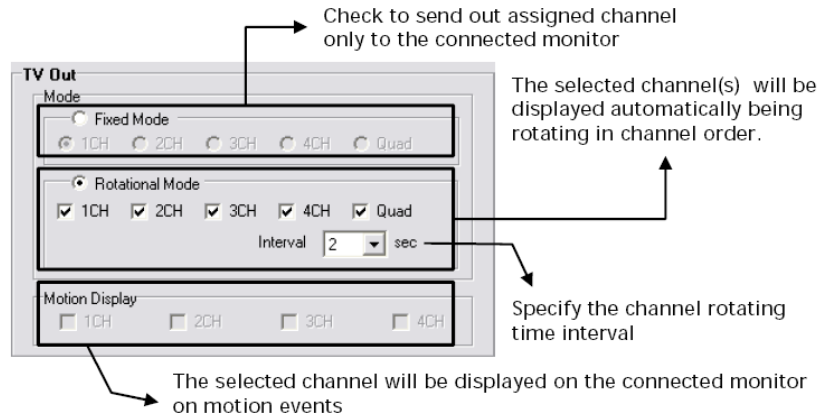
VS SITE

The VS Site displays the version of IP Remote software. Users are allowed to upgrade the program modules separately. After completion of update, the remote video server must reboot by clicking the reboot server button.



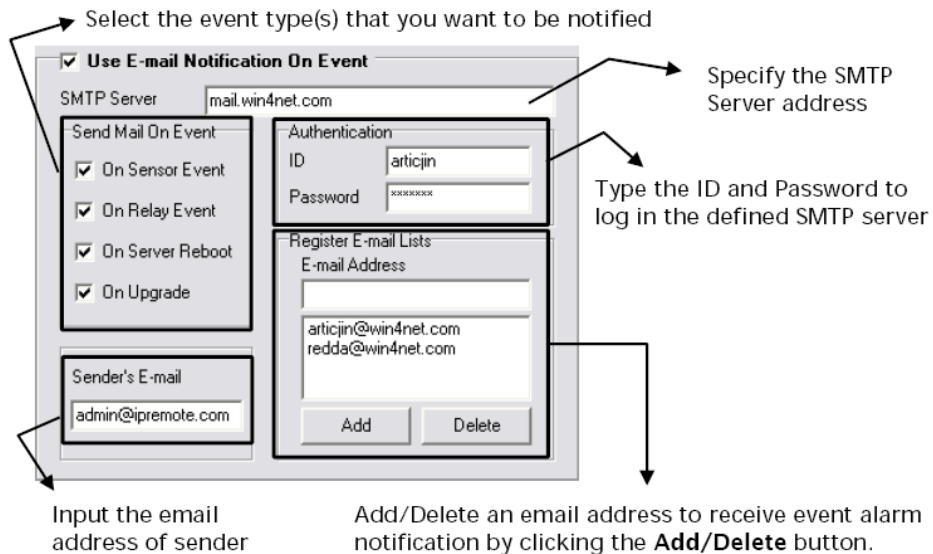
TV OUT

With these options, the user can set up preferences for the video output.



USE E-MAIL NOTIFICATION ON EVENT

If this option is checked, the IP Remote sends the event alarm notification to the registered users through the email.



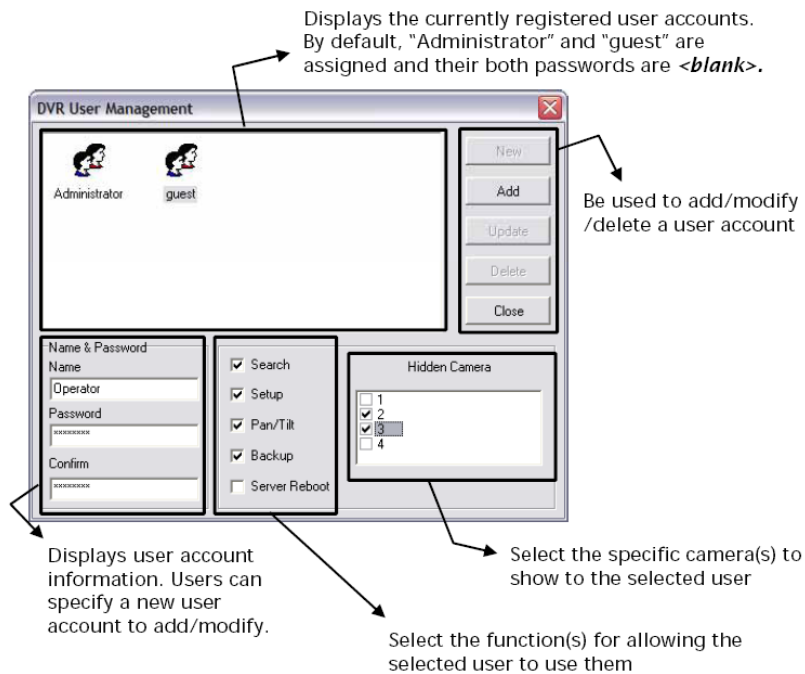
TIME CONFIGURATION

The IP Remote allows users to set the system time of the connected video server. The user can manually specify year, month, and day and also choose the particular time zone.



USER MANAGEMENT

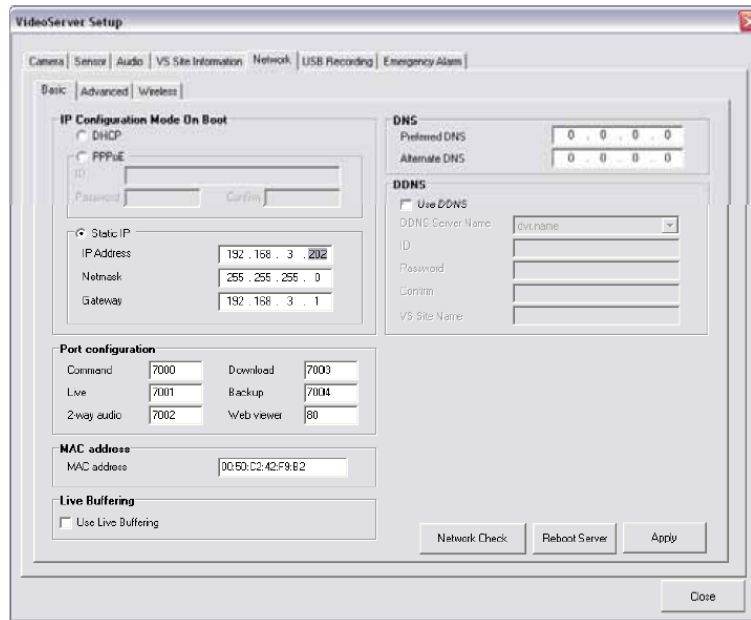
When the user management button is clicked, the DVR user management window will appear. On this window, the user can add/modify/delete accounts and give different permission to each account.



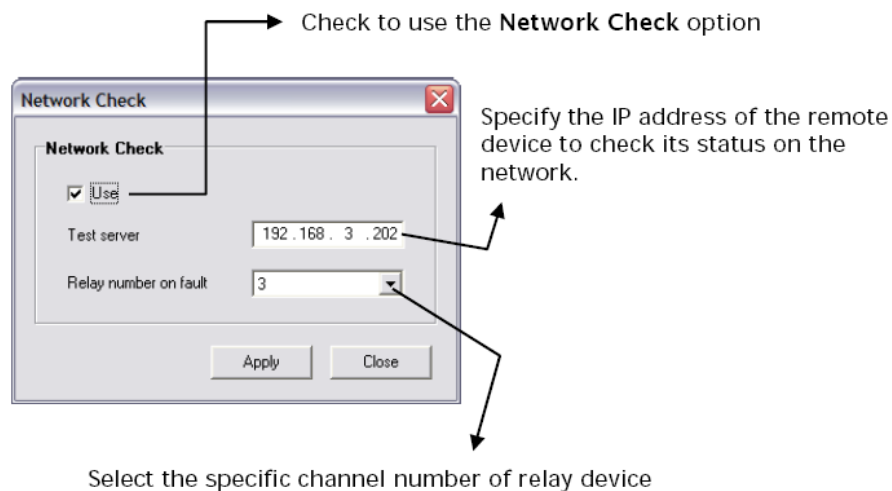
NETWORK

The network tab offers users three different options. The video server should reboot to apply modifications by clicking the reboot server button after any settings changed.

BASIC SETUP

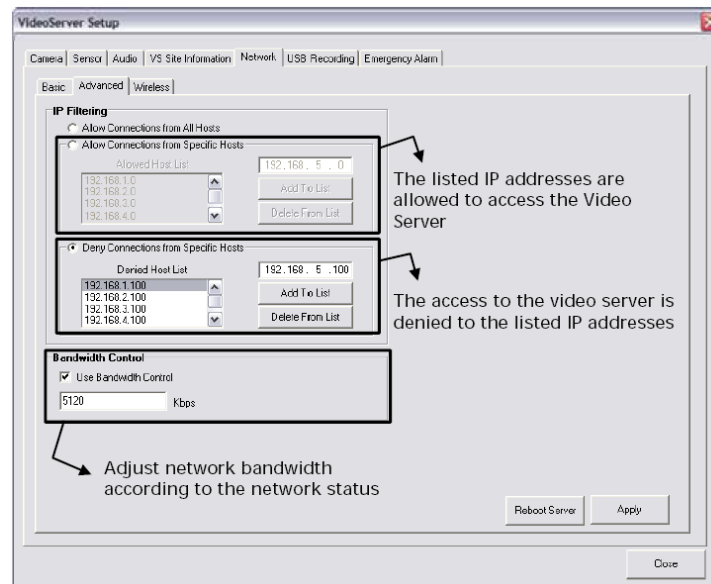


1. IP configuration mode on boot: Allows users to configure the appropriate IP settings according to their network environment.
2. DNS: Input the DNS server address.
3. DDNS: The DDNS works with dynamic IP addresses such as those assigned by an ISP or other server. If users use DDNS, they can more easily access to the video server from outside of the network.
4. Port configuration: Users can define the specific port numbers for each function.
5. MAC address: MAC address of the video server
6. Live Buffering: Check it to use a buffer for video data streaming.
7. Network Check: This function enables users to notice whether the remote device, such as a server, is alive on the network. If the device is suddenly disconnected or down, the relay device attached to the system will perform its action. This function, for example, can be used when the user need to always check the status of a momentous server. Using a specific relay device, the user also can set this option to automatically reboot a remote device being checked on no response.



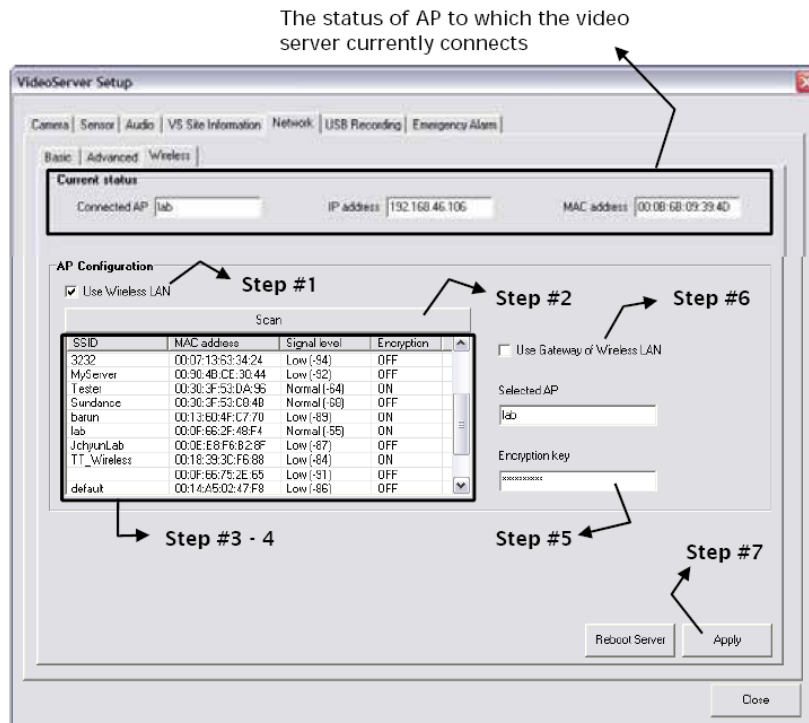
ADVANCED SETUP

With the advanced network setup options, users can get specific hosts allowed or blocked to protect the video server against indiscriminate access.



WIRELESS SETUP

IP Remote enables you to set up a wireless connection of video servers. You are also able to scan wireless connections near video servers and select to use one.

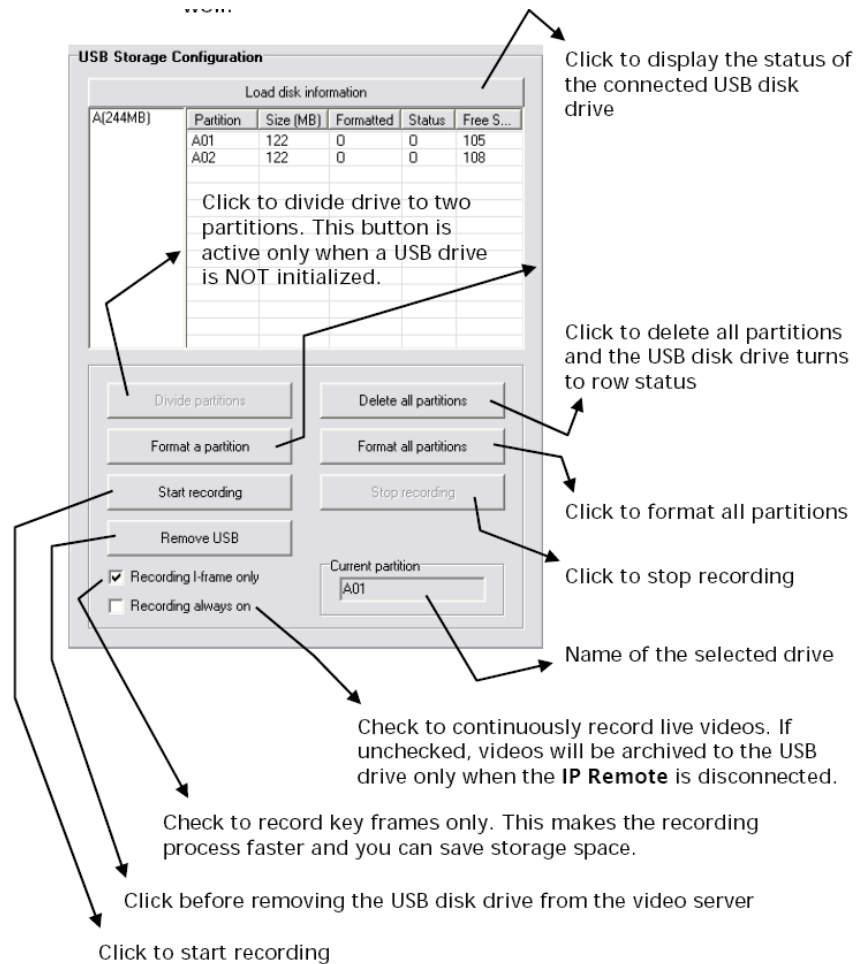


1. Check the Use Wireless LAN check box to access the wireless connection.
2. Click the Scan bar to find all wireless connections near the video server.
3. All of scanned wireless connections are displayed.
4. Choose the desired AP from the list.
5. If needed, input the encryption key.
6. Check the use gateway of wireless LAN to access the internet or WAN via the selected AP.
7. Click the apply button.

USB RECORDING

The IP Remote allows users to save live videos to an external USB device even when it is disconnected with the video server. Users can also back up the recorded videos to the local HDD.

1. USB Storage Configuration: On this portion, users can make partitions for the connected USB drive and format each partition. Recording can be controlled by clicking the start/stop recording button as well.

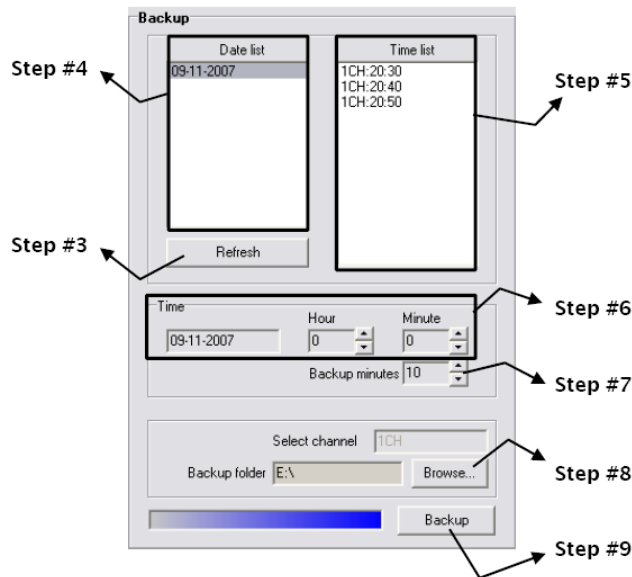


NOTE: Formatting and deleting partition will erase all information saved to the drive.

With this setup options the users can back up recorded video data to their options, local PC by date and time.

To perform backup process, follow those steps below:

1. Select the desired channel in the live mode.
2. Go to setup and USB recording.
3. Click the refresh button to load the latest recording info.
4. Select the desired date.
5. Select the desired time.
6. If required, manually specify the specific time.
7. Specify the length of backup time (by default, 10 minutes).
8. Click the browse button to select the specific location for saving backup data.
9. Click the backup button to start backup process.



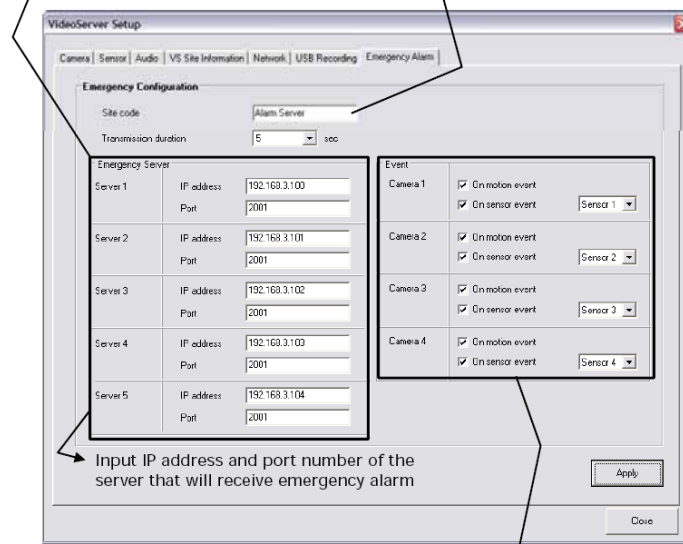
NOTE: Backup data can be viewed using the Backup Viewer.

EMERGENCY ALARM

The IP Remote can transfer a still image to the assigned servers when motion and sensor events occur.

When events are triggered, video server send out the event still shot to the assigned server for the defined duration.

Type the meaningful name for the selected video server. This name will be shown to the server that receives emergency alarm.



Check the specific event types triggered by the selected sensor

BACKUP VIEWER

INSTALLING THE BACKUP VIEWER

The backup viewer is a very light and simple utility that allows users to play back backup video data and convert it to the .AVI file. This program is provided with the IP Remote software.

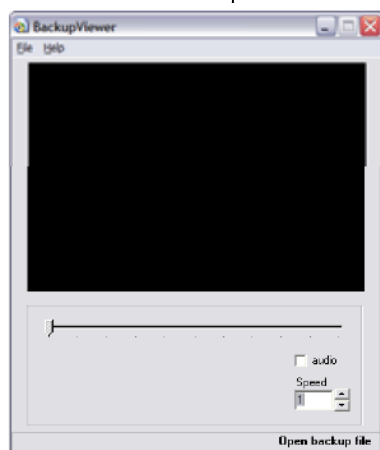
To install the Backup Viewer, complete the following steps:

1. Open Windows Explorer and go to “C:\Program Files\DVR_Uti\IP Remote”.
2. Find the file, named VSBackupViewer.exe and click it.
3. The Backup Viewer starts running.

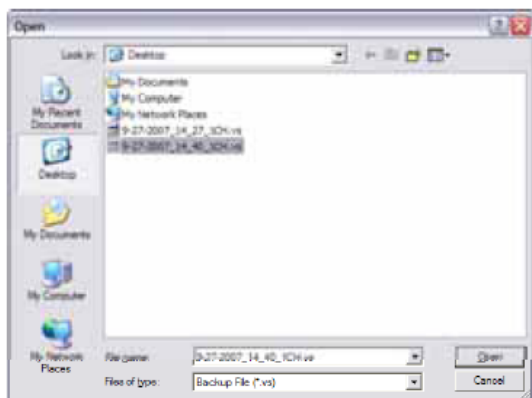
PLAYING BACKUP DATA

To view the backup video data, follow those steps below:

1. Run the Backup Viewer.



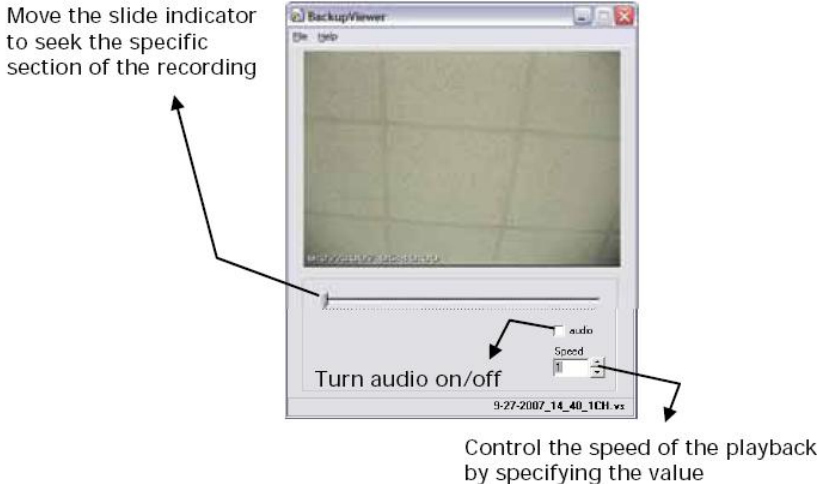
2. Click File >> Open.
3. The Open dialog box appears.



4. Select the desired file.
5. Click the Open button.

BACKUP VIEWER

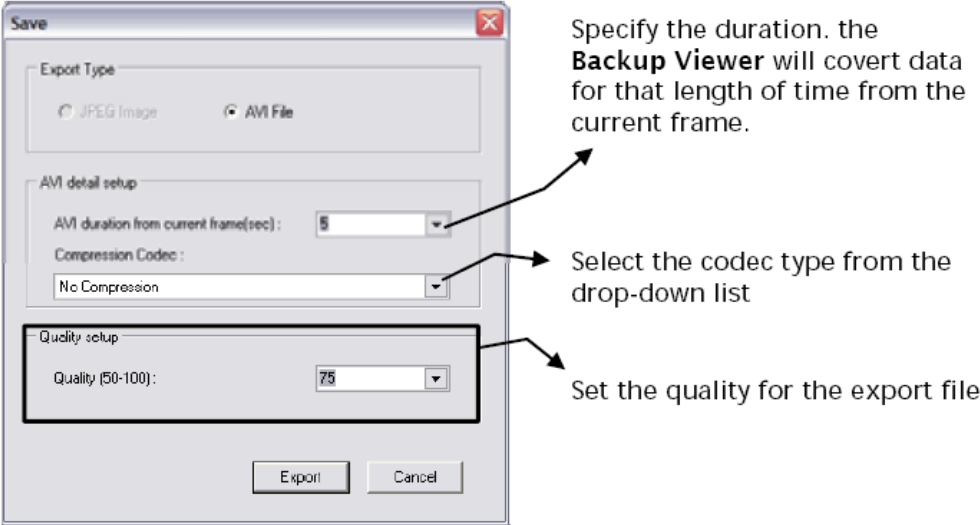
6. The backup video data is played on the screen.



CONVERTING BACKUP DATA

To convert the backup video data to the .AVI file format, complete the following steps:

- 1. Click File >> AVI Export.
- 2. The Save dialog box appears.



- 3. Click the Export button.
- 4. The Save As dialog box appears.

SPECIFICATIONS

VSMJP24E – C-MAX Video Server and Encoder

Operating System	Embedded Linux
Video In	1-ch BNC
Video Out	1-ch BNC
Audio In	1-ch
Audio Out	1-ch
Flash Memory	32 MB
Main Memory	32 MB
Power	DC 5V 2.4A Output
Compression Type	MPEG 2/4, MJPEG
Compression Level	4 level (superfine/fine/normal/low)
MAX Frame Rate	30 FPS @ 704x480 NTSC / 25 FPS @ 704x576 PAL
Resolution	704x480, 704x240, 352x240 NTSC / 704x576, 704x288, 352x288 PAL
LAN Port	Ethernet (10/100 base-T)
Interface	RJ45, RS-232, RS-485
Security	Password, IP filtering, data encryption
Backup	USB 2.0 / network
Sensor In	1 input
Relay Out	1 output
Indicator	Power LED, network status LED, relay & recording LED
Size	4.7 x 1.2 x 3.9 in. (120 x 30 x 98.2 mm)





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